FARM HOUSE REMODELING

PREPARED UNDER THE AUSPICES OF THE PRAIRIE RURAL HOUSING COMMITTEE SPONSORED BY THE GOVERNMENTS OF THE PROVINCES OF MANITOBA, SASKATCHEWAN AND ALBERTA AND BY CENTRAL MORTGAGE AND HOUSING CORPORATION

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FARM HOUSE REMODELING

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INTRODUCTION

Each year, major repairs and alterations are made to many western Canadian farm homes. This booklet is intended to assist all those who undertake the difficult task of remodeling. The information is divided into three general sections:

1. Planning for Remodeling
2. Remodeling Case Examples
3. Construction Problems

All illustrative material is derived from a survey of existing western Canadian farm houses. The case examples used are selected from a larger number which have been studied in the Planning Research Centre, and are typical of the many houses in need of remodeling throughout western Canada. It is hoped that study of these representative farm houses will give valuable assistance to those of you who plan remodeling.

WHY REMODEL YOUR FARM HOUSE?

Your house requires remodeling if it does not meet present day standards. These are the most common deficiencies:

1. Lack of space;
2. Inefficient use of space;
3. Lack of equipment and utilities;
4. Inadequate protection, comfort and convenience;
5. Outmoded and unattractive appearance.

The standard of comfort in a remodeled house must compare favorably with the standard of comfort in a new house. Moreover, remodeling should cost considerably less. So the immediate question arises: "Is it better for us to remodel our present house, or should we build a new house?" The answer to this question may not be evident until a remodeling scheme has been planned in sufficient detail to obtain a reliable cost estimate which can then be compared to the cost of building a new house.

Many old and occasionally worthless houses are being loaded with expensive electrical and plumbing equipment involving investments which sometimes amount to several thousand dollars. Expenditures should be undertaken only if the house is sufficiently sound to last as long as the new equipment. Too often the refrigerator, bathroom and water pressure system are worth more than the house itself. This improper balance tends to reduce the value of the new equipment, thus emphasizing the immediate need for modernization and repair of the house structure itself. A house is not modernized simply by fitting modern equipment into it. It must also have a workable plan and a cheerful appearance, inside and outside.

Remodeling costs are invariably higher than most persons anticipate. Many minor but essential details are overlooked when the cost is being computed and in addition, many individuals find it desirable to expand their remodeling plans after work is started. Wishful thinking will not keep remodeling costs down. It is much cheaper to determine, before money has been spent, whether or not remodeling costs will be too high. Therefore, it is advisable to plan carefully all the necessary remodeling before work is started, and to estimate costs liberally.

PLANNING FOR REMODELING

Good remodeling cannot be done without a thorough plan. Careful planning beforehand is as necessary for remodeling as it is for building a new house. The following section deals, step by step, with the considerations necessary for developing a good remodeling scheme.

PART 1

REALIZE YOUR FAMILY REQUIREMENTS

Good house planning begins with an analysis of family requirements. This basic analysis is the same for remodeling as it is for building a new house. As an aid to planning, list all the needs for a family group and for each individual.

All families differ to some extent. Some may be entirely adult. Some may have a number of young children. Many families include three generations. Often accommodation for hired help is a particular farm problem. In some instances two separate families live in one house. The household group may vary in many ways and so basic housing requirements may also vary.

The house is the centre for farm work and recreation. It should provide facilities for the variety of crafts and hobbies in which each family member participates. List these activities, which may include wood and metal working, model making, sewing, quilting, music and so on. Such typical pastimes of farm boys or girls are useful as well as recreational. A farm house, old or new, must be planned to allow full scope for these crafts and hobbies.

Remember also that "family needs" change. This is especially true of the family with children. Often the house literally grows up with the children, and remodeling a house for a family with young children today does not ensure against the need for altered accommodation five years hence. A house should, therefore, be planned to allow as much as possible for future alterations.

THEN WHAT WILL YOUR SPACE REQUIREMENTS BE?

After the family requirements have been determined, space requirements for the remodeled house can be established. Listed below are the activities and the types and sizes of rooms necessary to accommodate them.

All parts of the house belong to one of three activity divisions:

1. The work area, which includes the utility room, kitchen and often the dining space;
2. The recreation area, which includes the living room and summer porches;
3. The relaxation area, which includes bedrooms and bathroom.

Appropriate storage space must be planned for each division.

Listed here are the main room requirements and corresponding floor areas which should make serviceable rooms:

The work area

1. Kitchen without dining..... 100 sq. ft.
2. Kitchen with dining..... 160 sq. ft.
3. Dining room..... 90 sq. ft.
4. Utility room with laundry and cream separating..... 60 sq. ft.
5. Utility room as above with preserve storage and carpenter bench added..... 100 sq. ft.

The recreation area

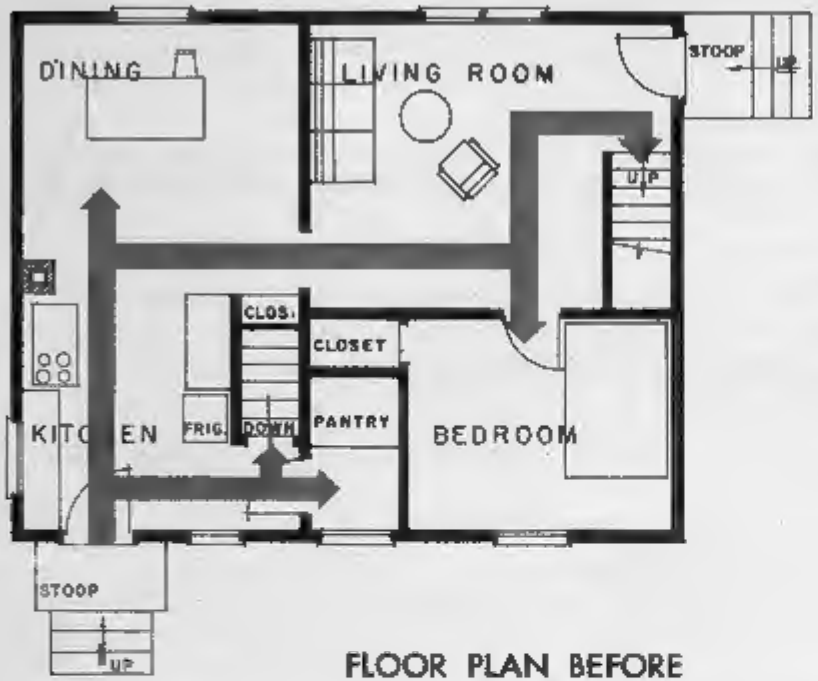
1. Living room for chesterfield and chairs..... 150 sq. ft.
2. Living-dining room..... 190 sq. ft.
3. Living room for chesterfield, chairs, piano, desk..... 190 sq. ft.

The relaxation area

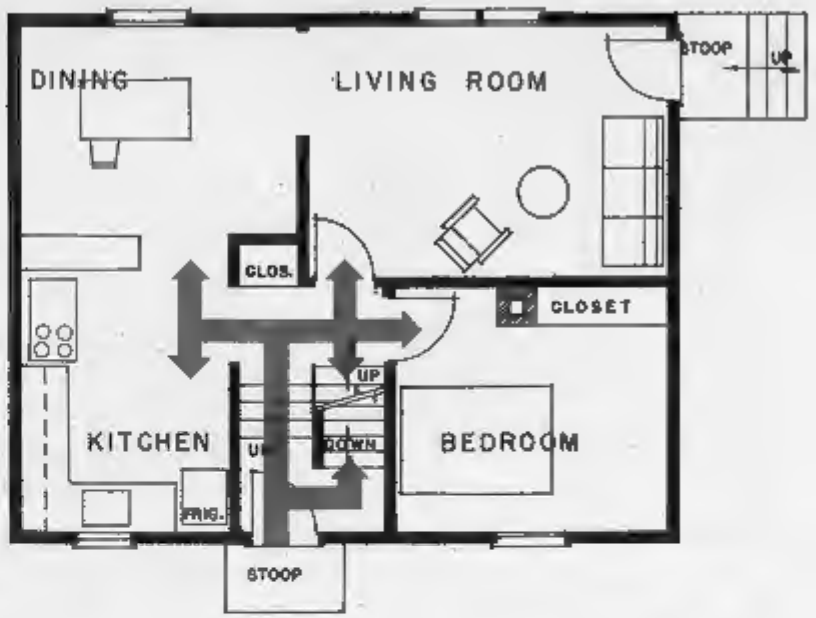
1. Master bedroom..... 120 sq. ft.
2. Master bedroom plus sewing..... 140 sq. ft.
3. Other bedrooms..... 100 sq. ft.

Each bedroom closet will be a minimum of 2 ft. deep and 3 feet. wide.

TRAFFIC PATHS HELP DETERMINE THE PLAN



FLOOR PLAN BEFORE



FLOOR PLAN AFTER

A well planned house must have a minimum area allotted to traffic lanes from the main entrances through halls and stairways to the important rooms of the house. Bad traffic circulation in the house can usually be remedied at the time of remodeling.

The back door is the most frequently used entrance to the farm house and it is from this point that traffic lanes start. Entering by the back door a person should be able to reach any part of the house without passing through other rooms on the way.

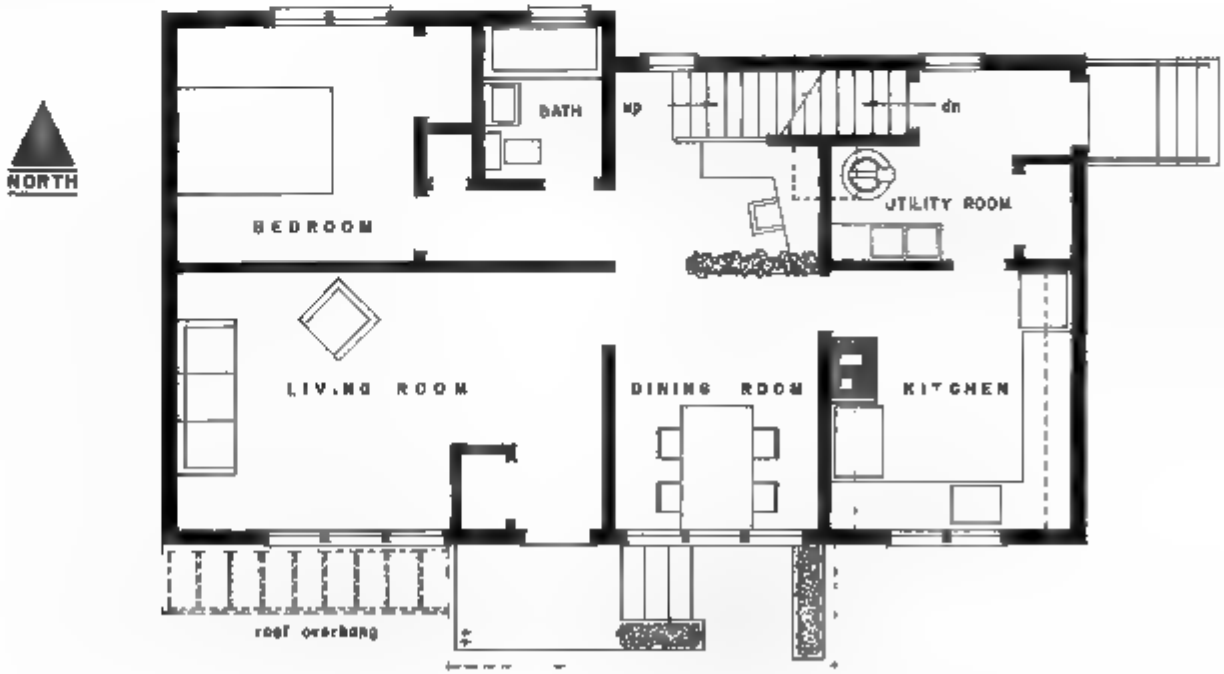
The two plans on this page are of the same house, (1) before, and (2) after remodeling. The broad red lines on each plan indicate the traffic paths. The reduction of traffic or circulation space on the remodeled plan is obvious. The principal difficulty of the old plan was the extremely awkward location of the stairs. Also, in a small house such as this, much valuable space was wasted when the stairs to the second floor and to the basement were not built one above the other. Entirely new stairs have been built in the house, this time with a grade entrance at the back door. By doing this, nearly all the circulation difficulties have been overcome. In addition, there is now the possibility of remodeling the second floor to contain a bathroom and two bedrooms, whereas only one bedroom was possible before.

ORIENTATION AND VIEW ARE IMPORTANT CONSIDERATIONS

Orientat on of a building means its location on the site in relation to the d rections of the compass. Since the survey lines in Western Canada run d rectly east-west and north-south, most farm houses are orientated so that the walls face each d rection square y There are preferred orientations for each room in the house, that is, some rooms are more des rable when they face one direction and some are more des rable when they face another Princ pa iv- ng rooms are best s tuated when they open on the south or east sides of the house Thus, with large southerly w ndows, rooms rema n bright, warm and cheerful North is the least desirable orientat on for living areas, therefore whenever possible, areas such as the utility room, bathroom or stairs should occupy the north s de of the house Although it s difficult to remodel a plan to secure the best orientation for each room, a tt e effort at the p anning stage can often produce decided improvements

There are preferred v ews for certain rooms of the farm house For example, the kitchen windows shou d always overlook the farmyard and, whenever pos sible, the driveway The dining and liv ng room windows shou d take advantage of andscaping around the house or whatever natura views ex st Very often the preferred orientation for rooms and the best views can be favorably combined

The floor p an shown on th s page is from the remodel ng scheme described on pages 12 to 18 The remodeled plan has been evolved to prov de the best combination of orientation and view for the pr nc pal rooms There is an ex- pansive v ew wh ch stretches off to a range of h ds fifteen m les to the south. The living room, d n ng room and kitchen take ful advantage of th s view, which is also the best orientation for these rooms. The sun makes them bright and cheery during the co d weather and the windows are shielded from the sum- mer sun by a w de roof overhang The util ty room, stairs, bathroom and one bedroom are along the north side of the plan

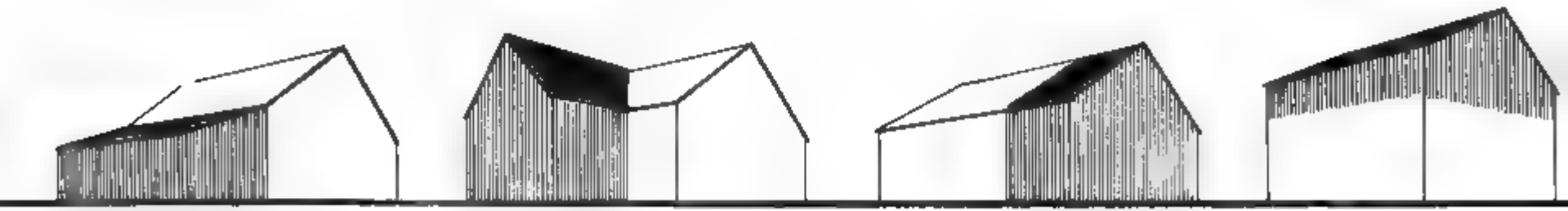


THE EXISTING STRUCTURE LIMITS THE EXTENT OF REMODELING

Remodeling proposals cannot be made without giving due consideration to certain parts of the house which are difficult or expensive to alter. Check all partitions carefully to find out which walls bear floor or roof loads from above and therefore must be retained in the remodeled plan. In general, chimneys and stairways should be left intact on the remodeled plan. However, it is not uncommon to find that either the chimney or stairway is inadequate or improperly built and therefore requires re-building.

As a rule, windows in a frame house are not too difficult to re-set. However, re-setting should be done only when there are advantages to be obtained. Windows in a masonry house are much more difficult to alter and should retain their original locations, where possible, in the remodeled scheme.

VARIOUS ADDITIONS CAN BE MADE TO A HOUSE



LEAN - TO | WING | GABLE END | ROOF

The majority of persons who want to remodel are concerned with increasing the size of their houses. There are four general ways of doing this. The four methods of making an addition are illustrated in the accompanying diagrams.

The most appropriate method depends on the characteristics of the particular house and the type of extra accommodation required. It is usually easier to build a lean-to or a new wing than to extend a gable or lift a roof.

EVALUATE THE CONDITION OF YOUR HOUSE —IS REMODELING A SOUND VENTURE?

Up to this po nt we have d scussed certa n planning considerat ons wh ch are prerequisite to remode ing We have learned to analyze the fam ly require ments and to trans ate them nto space requirements the appropr ate number, type and size of rooms We have also mentioned some of the features of traffic paths and or entation two important po nts in organiz ng the modern house into a cheerful, comfortable place in wh ch to l ve

At this stage if you are aware of your own fam ly requ rements and the short comings of your house, you should be able to dec de whether the necessary remode ing warrants the expense Minor alterat ons are always worthwh le but if major changes and add t ons are contemplated the cost of remodel ng as compared with the cost of new construct on should be caretu ly considered Th s is partic u arly true if a house is n a dilapidated condition If here is still d fficulty in making a decision you should draw a complete plan of the remodel ng proposals. Quotations on the cost of supplying materia s and labor can be obtained from a quanified architect or contractor In this way you should be ab e to decide the question s it better for us to remode our present house or to build a new house?

✓ Check the Following Points

1. Foundation and footings
2. Si ls.
3. Exterior wa ls
4. Door frames.
5. W ndow frames
6. Floors
7. Flash ng
8. Chimneys.
9. Roof
10. Eavestroughs and downspouts

NOW LET'S FOLLOW A REMODELING PROJECT FROM START TO FINISH

Th s house s in need of remodeling primarily because t is rapidly fa ing into a state of disrepair The o d k tchen ean-to is spitt ng away from the main body of the house The house has no foundation However, the two storey b ock of the house is sti . in good condit on, and with su tabie remodeling, can be transformed into a comfortable modern residence.

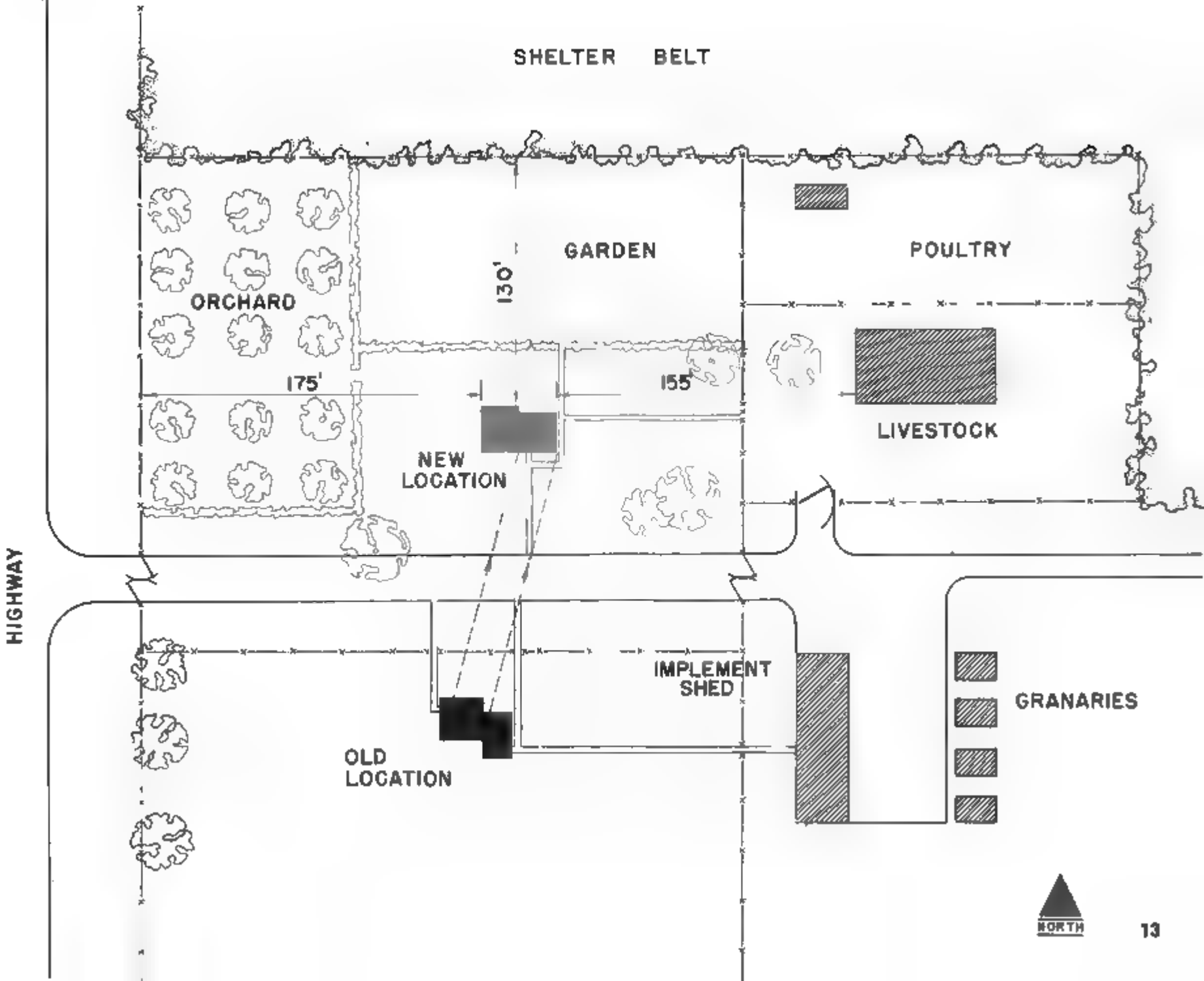
FIRST CONSIDER THE FARM SITE

A farm house s one building of the farmstead group. As such t cannot be planned without spec al reference to the location of the var ous outbu ldings and the partcular cimatic characteristics of the location Remodel ng plans cannot be made independently of the farmsite, as far as poss b e, they should compiy w th the peculiarities of the site

As many old houses are w thout a basement or foundation, this construct.on is always the first step in remodel ng in such cases there s a possib lity of mov ng a house to a different location f advantages are to be gained thereby It s easier to bu ld a oundation and to move a house onto t, than t is to excavate and to bui d a foundation direct y under a house When a house is being moved, there s an opportunity, i desired of rotat ng it 90° or 180° to take advantage of better orientation.

The farmsite ndicated on the next page shows both the former and the new location of the house In the former s tuat on the house stood out in the open and most of the rooms faced away from the dr veway and farm bu ld ngs The garden a ong the south side of the she terbe t was a long way from the house Moving the house across to he garden s de of the driveway was ent rely ogica because it was then in the centre o farmyard ac v ty a comfortable distance from the barn and poultry house and only a few steps arther away from the machine shed. t is now located so that it can be attractively andscaped A small orchard has been p anned c ose to the road The area a lotted for the house yard is not so large that maintenance of lawns and hedges will be burdensome

The dimensions on the plan indicate appropriate distances for locatron of the house from the barn, the shelterbelt, and the road allowance


SHELTER BELT
GARDEN
130'
POULTRY
ORCHARD
175'
155'
LIVESTOCK
NEW LOCATION
HIGHWAY
IMPLEMENT SHED
GRANARIES
OLD LOCATION
NORTH

ANALYZE THE FAMILY LIVING REQUIREMENTS

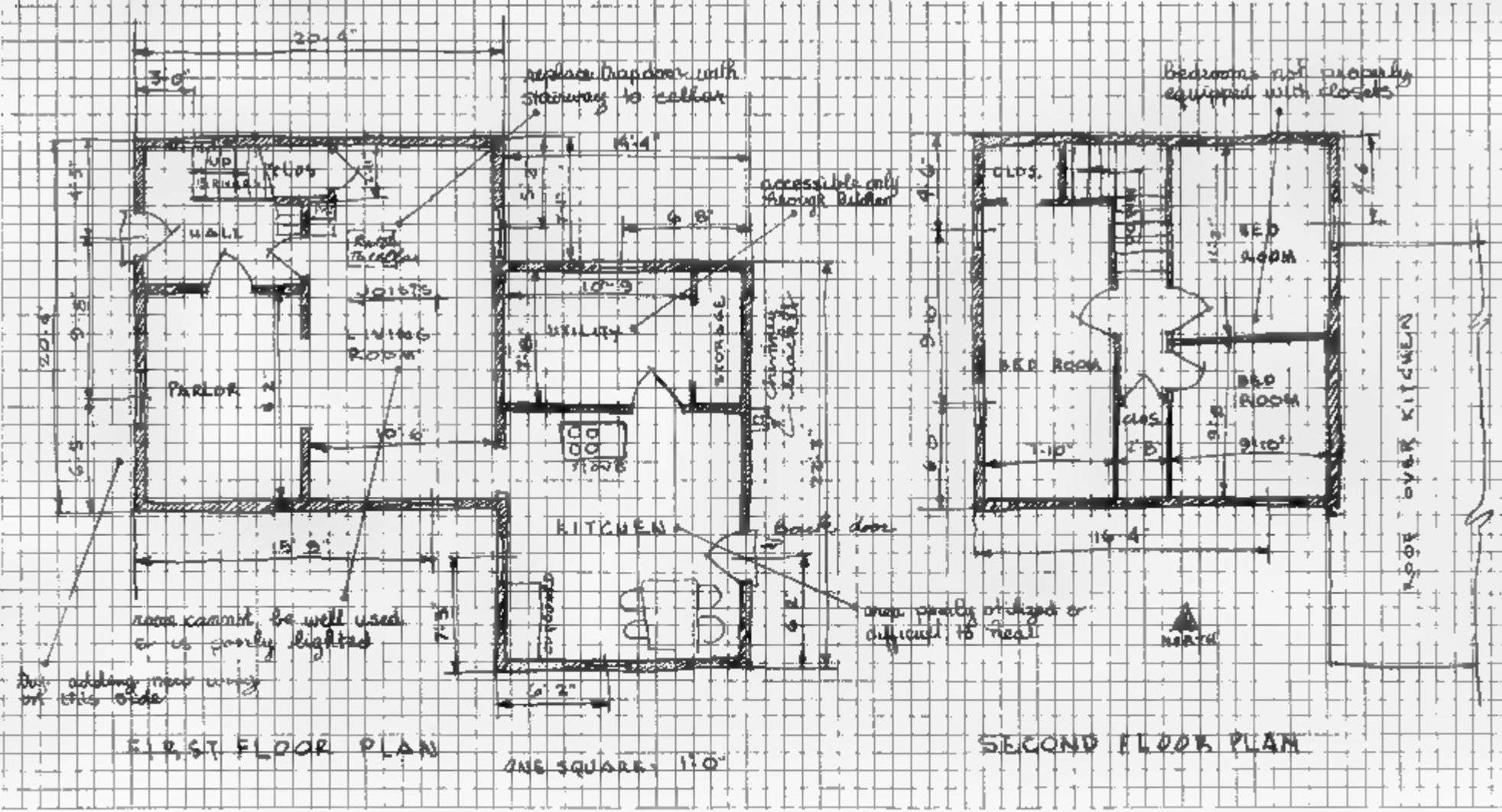
Rebu ld.ng cannot be undertaken w thout first hav ng a clear picture of what accommodation is required n the remodeled house This is obtained by a thorough analysis of the fam.ly l ving requirements The family in th s case consists of s x persons: the parents, and four ch ldren (three boys and one girl) nearing adulthood The activities of the boys keep them out of doors most of the time The house must provide for them comfortab e sleeping quarters, plenty of closet space and suff cient elbow room at the dining table The requ rements of the mother and daughter do not differ from those of most farm women a modern uti ity room and k tchen and, if possible, a separate area for sewing The father's particular requirement is a small office area where he can keep records and books.

AND LIST THE SPACE REQUIREMENTS

Family requirements, having been decided, must be trans ated into actual l ving areas. It is suggested that the house to be remodeled should provide

1 A small utility room,
2 A k tchen and d ning room,
3 A large living room,
4 A small office area,
5 Four bedrooms and closets;
6 A bathroom,
7 A sewing area;

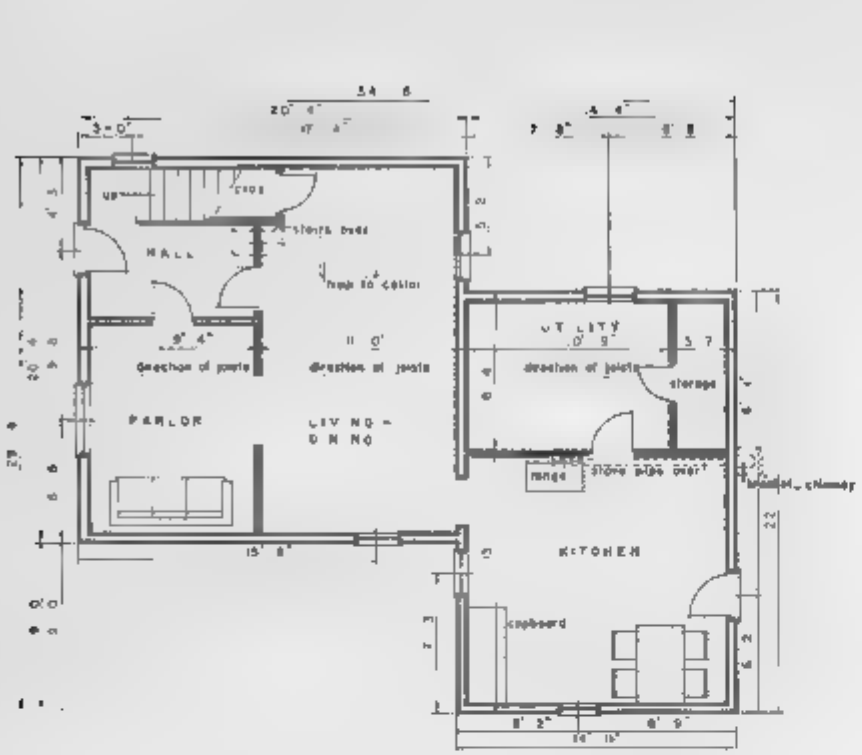
Since the children are nearing the adult stage maximum occupancy wil occur during the next three or four years ater the number of occupants may drop to three or four This fact must be kept in mind when plann ng the remodeling so that, as the amily becomes sma ler, the house w ll not tend to fee too large and empty In order to accommodate the smaller family, the remodeled plan shou d have one bed room and the bathroom on the ground floor



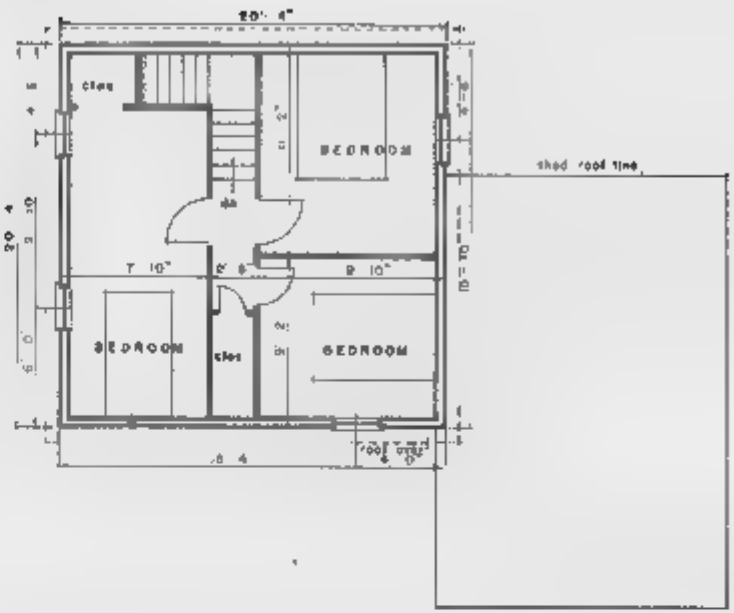
MAKE SKETCHES OF THE EXISTING PLANS

A plan of the existing house is necessary. This plan should be drawn carefully to scale and all important dimensions should be indicated. For convenience draw it on a sheet of squared paper on which each square represents one foot. Any important features of the construction, such as the direction and size of the floor joists, should be noted on the plans. Photographs of all sides of the house are of valuable assistance in preparing the remodeling plans.

At this stage there should be some assurance that remodeling will be economical. In this case it was found that the house structure was sound, but needed a concrete foundation, a new chimney and some extra windows. The one storey lean-to was not worth retaining. Therefore, to accommodate the space requirements, a new wing was required. The work will be extensive, but since the existing two storey block of the house can be left intact, remodelling is feasible.



FIRST FLOOR PLAN BEFORE

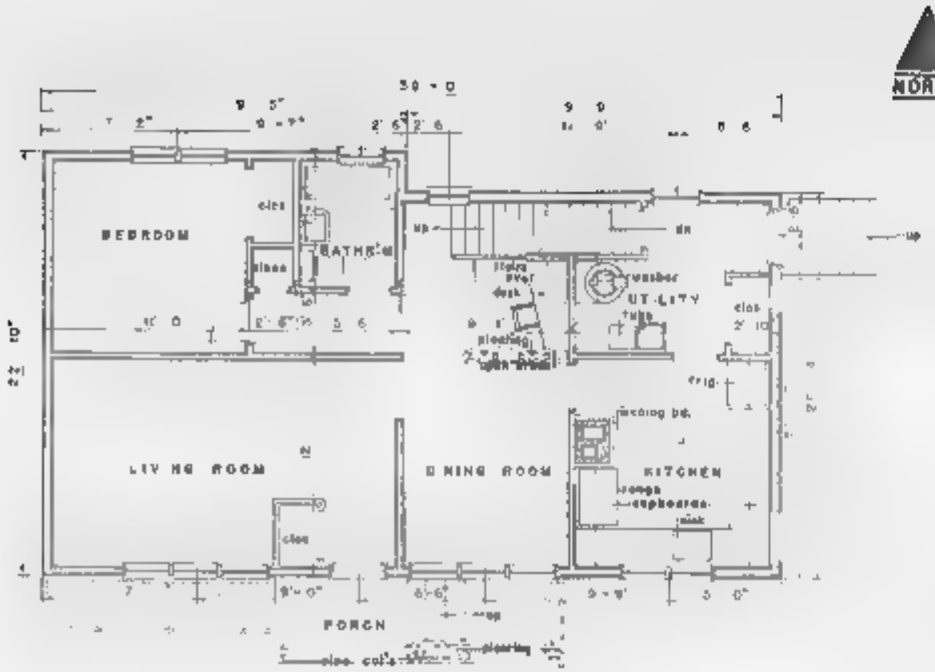


SECOND FLOOR PLAN BEFORE

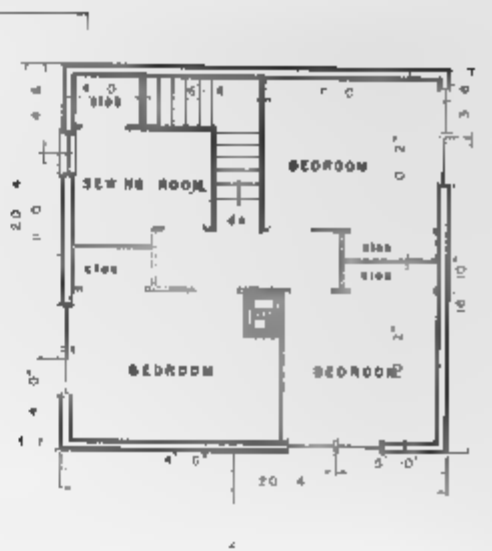
THE EXISTING PLANS

The actual process of developing the remodeled plans follows. The plans above have been carefully drafted from the rough sketches illustrated on the previous page. Using these plans as a background, remodeling ideas can be drawn on a sheet of tissue paper placed over them. In this way, various ideas can be tested quickly for their practicability. When a satisfactory scheme has been evolved, it can then be drawn up with accuracy and in detail.

Removal of the kitchen lean-to was an early decision. A certain amount of useful material can be salvaged from it. This leaves the two storey block of the house standing free. Necessary additional space can be provided most easily by building on a new one storey wing. Extra accommodation is needed for a kitchen and utility room, one extra bedroom and a bathroom. The intermediate planning steps are not shown here, but the remodeled plans illustrate



FIRST FLOOR PLAN AFTER



SECOND FLOOR PLAN AFTER

THE REMODELED PLANS

how provision was made for these requirements. The new one storey wing consisted of a living room, a bedroom and a bathroom, while the ground floor of the old house was adapted to a utility room and a kitchen dining room

On completion of the remodeling plan, a new foundation can be designed for the house The basement area should provide space for a furnace, fuel room, cistern, storage, and a recreation room

Remarkably few changes are necessary for the original part of the house The stairs to the second floor remain intact, and directly beneath these, stairs to the basement can be built A new chimney is added and is placed in a location which will not hinder planning of the second floor This floor remains unchanged save for additional closets and windows and a sewing room, which is the result of partitioning the long bedroom Office space has been found on the first floor in the hall beside the stairs

View from Southwest—BEFORE

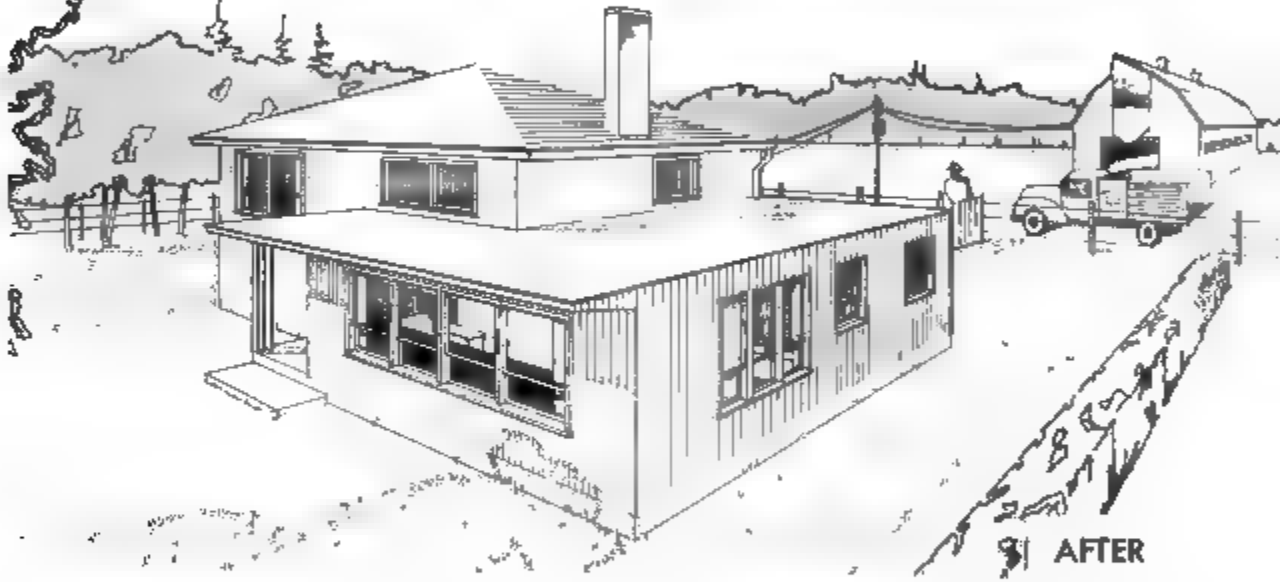
AND HERE IS THE EXTERIOR

The photograph and sketch show the improvements brought about by remodelling. The old run-down house has been transformed into a modern residence, a valuable asset to the farm for many years to come.

Improved finishing materials have been used on the outside of the house. The old siding and roofing had become so weathered that they would not take a good lasting finish. So the expense of new finishing materials is warranted. Painted clapboard siding has been used on the first storey and stucco on the second storey. The hipped roof has been converted into a gable roof and re-shingled. This change, though not essential, results in an appearance which is appropriate to the remodeled plan.

View from Southwest—AFTER

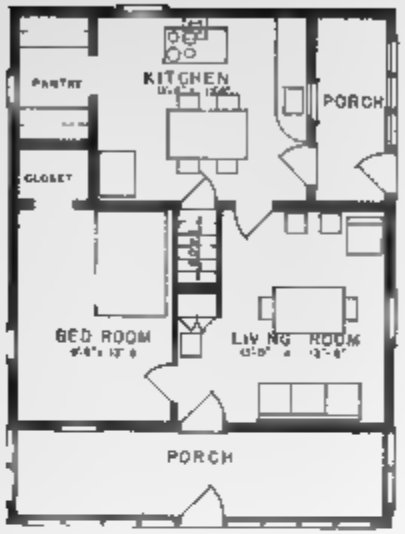
BEFORE



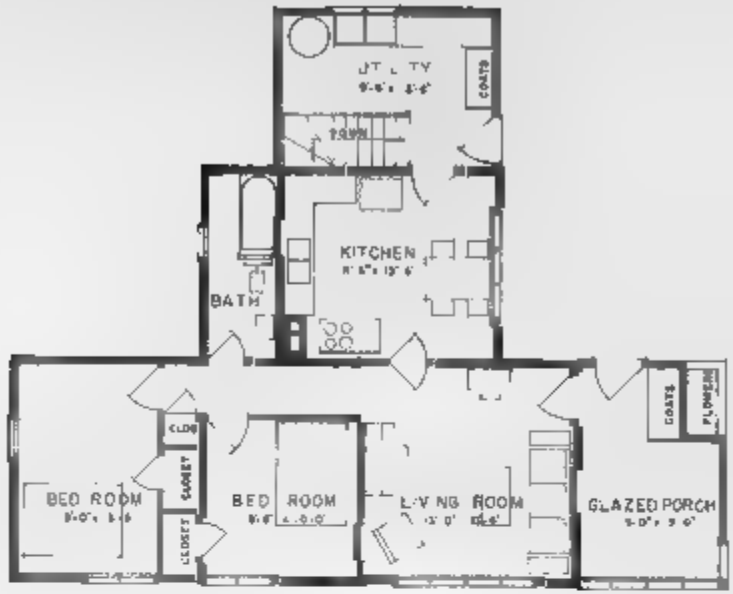
AFTER

CASE EXAMPLES–BEFORE and AFTER

On the next few pages are illustrated a number of diversified remodeling problems with suggested solutions. These houses were selected because they are typical of many houses throughout western Canada which are in need of remodeling. Many useful ideas may be obtained by study of the various solutions.



FLOOR PLAN BEFORE



FLOOR PLAN AFTER

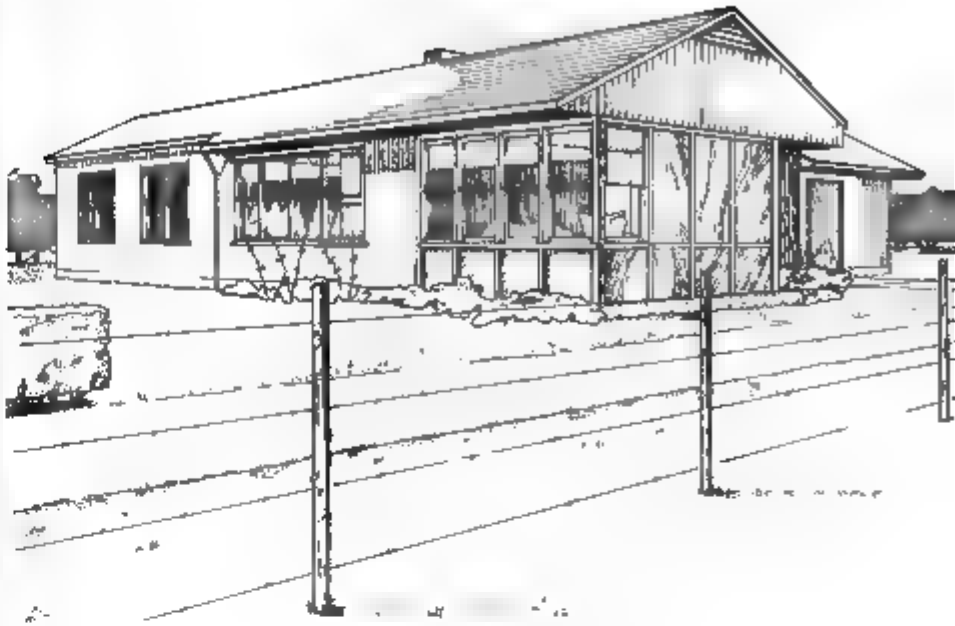
A SMALL COTTAGE EXTENDED IN THREE DIRECTIONS

Th s small bungalow was bu lt in severa stages but st ll acks adequate space There s no ut lity room or bathroom. At east one more bedroom is urgently needed Storage space is insufficient n addition to the extra rooms, the new p an must provide for the necessary closets and cupboards

Two porches added to the house some t me n the past, must be removed The sma l back porch wi l not be needed f a uti ty room is to be prov ded Therefore, it can be removed and the mater al salvaged The long narrow porch stretch ng across the south side of the house prohibits easy extension of the ma n house wing and should be removed During the winter this porch cuts out most of the sun ight wh ch cou d otherw se penetrate the l ving room and bedroom during the summer the unprotected windows absorb much heat and make the porch uncomfortably warm all day long

The first consideration is the remova of both porches The small pantry lean-to on the or ginal p an s retained because it allows space for a bathroom The remode ed p an extends the T-shape n each direction, adding a uti ty room at the north end one bedroom at the west end and a new porch at the east end The scheme, thus planned could be built in several stages The basement sta rs should be moved to a more favorable location in the new uti ty

View from Southeast—BEFORE



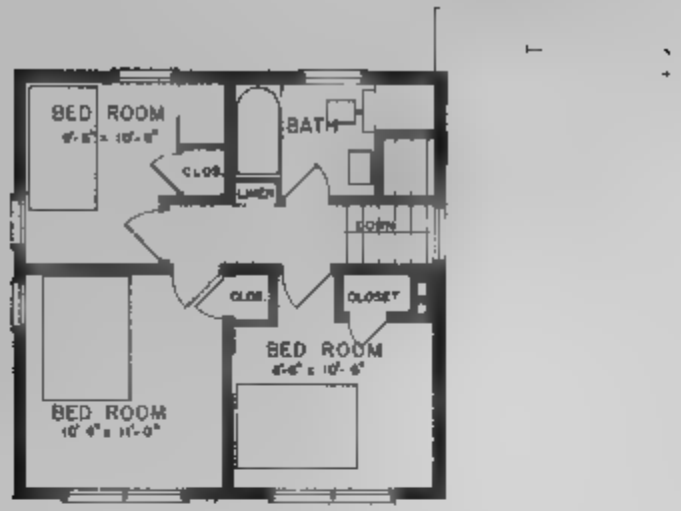
View from Southeast—AFTER

room wh ch s arge enough to take care of a l the household activities on the average farm The position of the kitchen remains unchanged but its arrangement has been modernized Kitchen and bathroom plumbing are now located on opposite sides of a common wal

The length of the main wing of the house is now in an east-west d rection, the sun porch, living room and two bedrooms al face south After removal of the basement stairs from the r orig nal posit on, the liv ng area s enlarged so that it can be arranged more comfortably When the new bedroom s bu lt on the west end, adequate storage closets will also be included The roof ine has been extended about two and one-half feet over the large window areas of the ving room and porch to protect them from the high summer sun

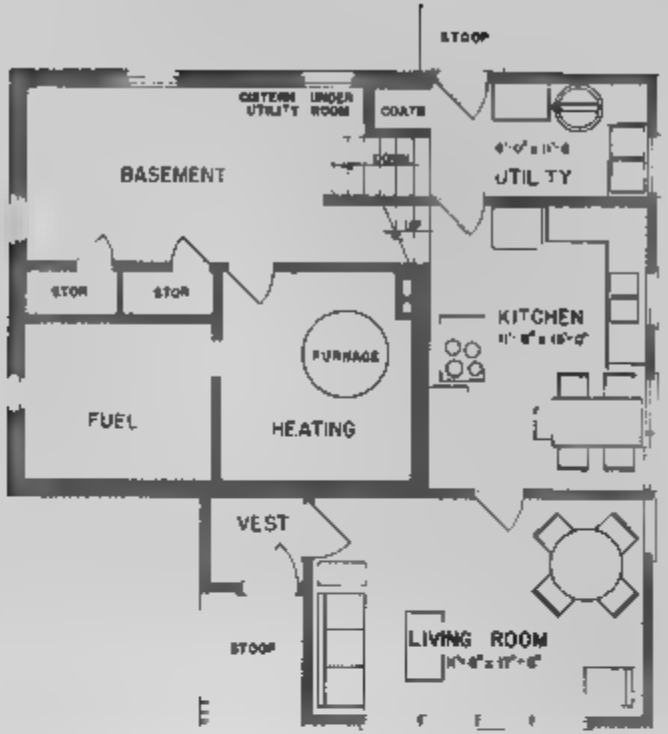
A notable feature of th s plan is that no new window frames and sashes are necessary Those removed from the o d porches may be used in the remodeling. Because of the extent of the alterations, refinish ng of the exterior is necessary. For th s house natura finished cedar has been chosen Attractive in appearance, it is most easi y appl ed vertically

Alterations, although extensive, may be made w thout difficulty The remodeled house compares favorably with any new house providing the same fac ities

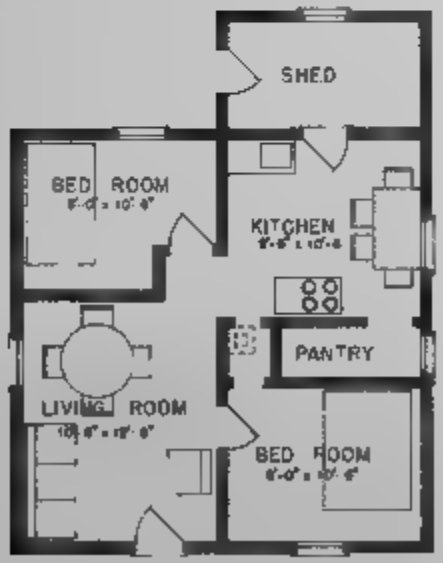


ROOF OVER ADDITION

UPPER LEVEL AFTER



LOWER LEVEL AFTER



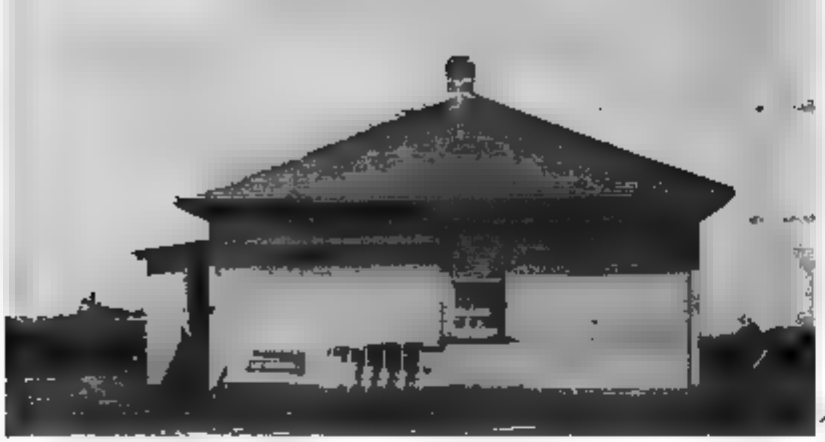
FLOOR PLAN BEFORE

A REMODELED PLAN USING THREE LEVELS

"Family needs" rapidly outgrew this small cottage. At least twice as much floor space was required. The house was to be enlarged and modernized to include power, water and a furnace.

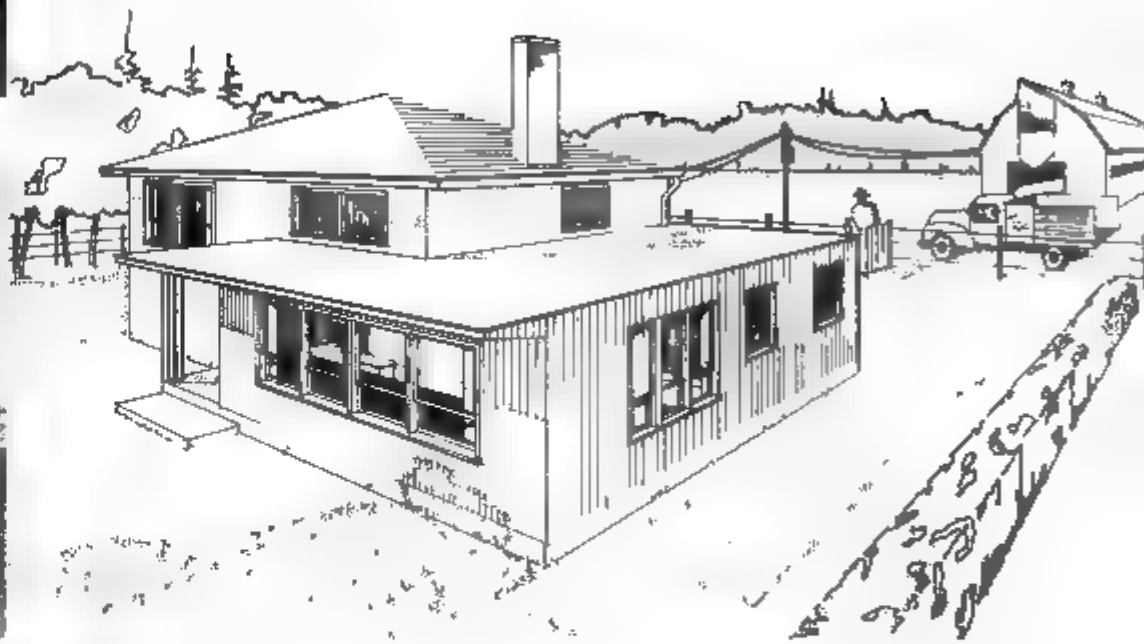
The original house consisted of two bedrooms, a living room, and a small kitchen and pantry. An earth cellar was partially excavated.

One additional bedroom, a bathroom, a small utility room, a fully modernized kitchen and a large living room are included in the remodeled plan. The house will be set on a concrete foundation with a basement under the original portion.



East — BEFORE

North — BEFORE

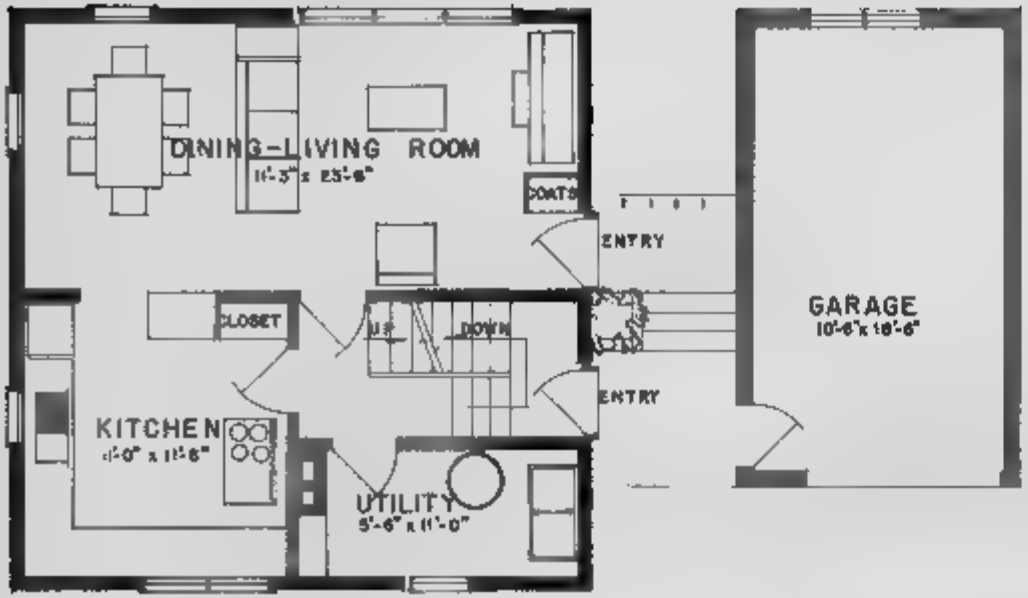


View from Northwest — AFTER

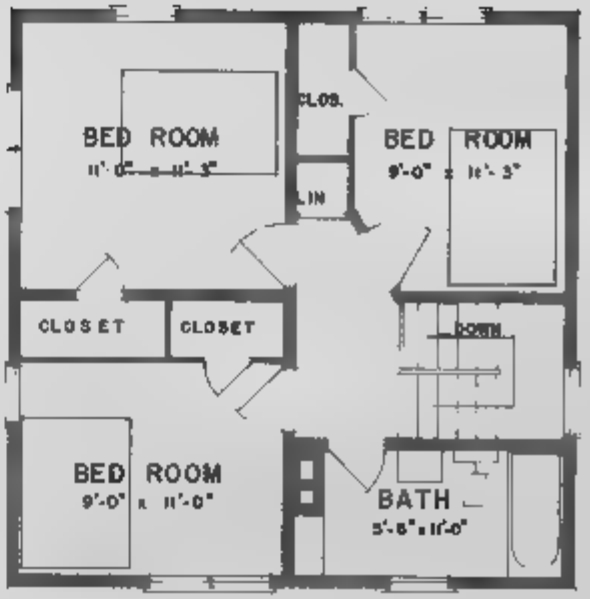
Note that the original structure now contains three bedrooms and the bathroom. There is also ample space for closets and storage. This whole section sits about four feet above the ground on a concrete foundation. The basement underneath is well lighted and contains furnace, fuel room, storage and work room. The new section which contains the utility, kitchen and living rooms is built close to the ground and has no basement below. However, a concrete cistern is located underneath the utility room. This 'split-level' arrangement enables one to proceed from the main floor half a flight of stairs up to the bedrooms or half a flight down to the basement, a scheme which has become popular because it affords economy of structure and convenience of plan.

Occasionally, as in this particular case, the split-level plan is useful as a remodeling scheme. The original structure is raised on jacks while the foundation is being built, and while the new structure is being added family life goes on without interruption. The new wing having been completed, the original section can be vacated during alterations. In this way, prolonged inconvenience is substantially reduced.

This house has been refinished in a manner which harmonizes with the improved plan. The original portion is stuccoed and the new section which is finished in vertical siding, has a flat roof for reasons of simplicity and economy of construction.

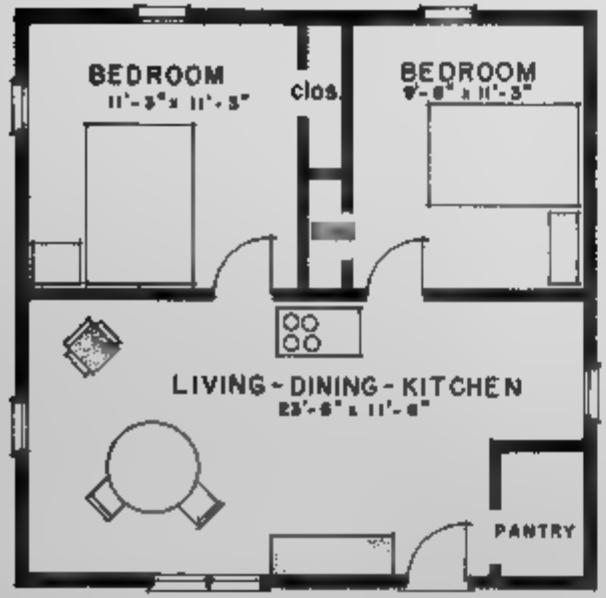


FIRST FLOOR PLAN AFTER



NORTH

SECOND FLOOR PLAN AFTER



FLOOR PLAN BEFORE

A BUNGALOW BECOMES A TWO STOREY HOUSE

This is a solution for increasing the size of a small cottage originally consisting of two bedrooms and a combined kitchen-dining-living room. Although the house was without modern conveniences, it was set on an excellent concrete block foundation.

To fulfil the family requirements, remodeling must include a modern kitchen, utility room, bathroom, one extra bedroom, and increased closet and storage space. A new garage, handy to the house, is also proposed.

A cottage of this type, with a good foundation and a hipped roof, can sometimes be remodeled most easily by elevating the roof and constructing a second

View From North East—BEFORE

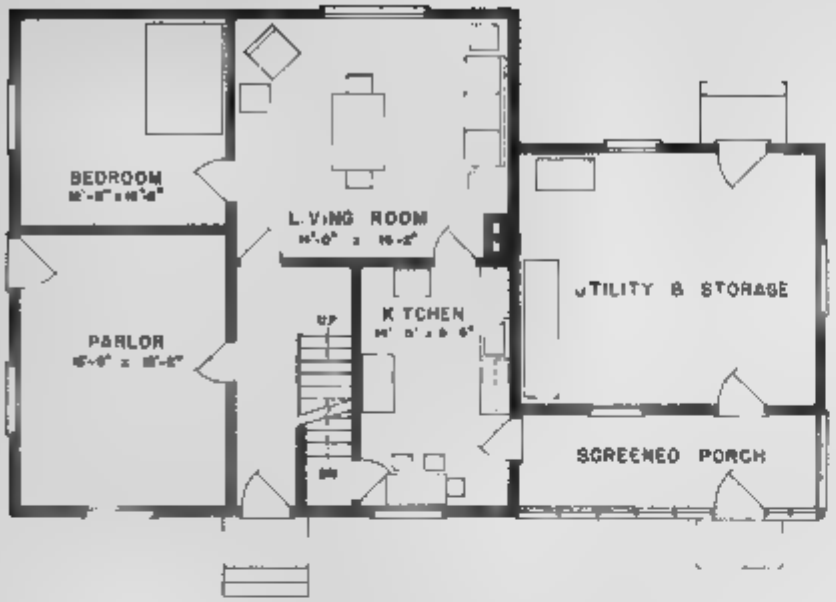
View From North East—AFTER

floor The addition of a second floor provides space for three bedrooms and a bathroom, leaving the ground floor area for a utility room, kitchen, dining and living room

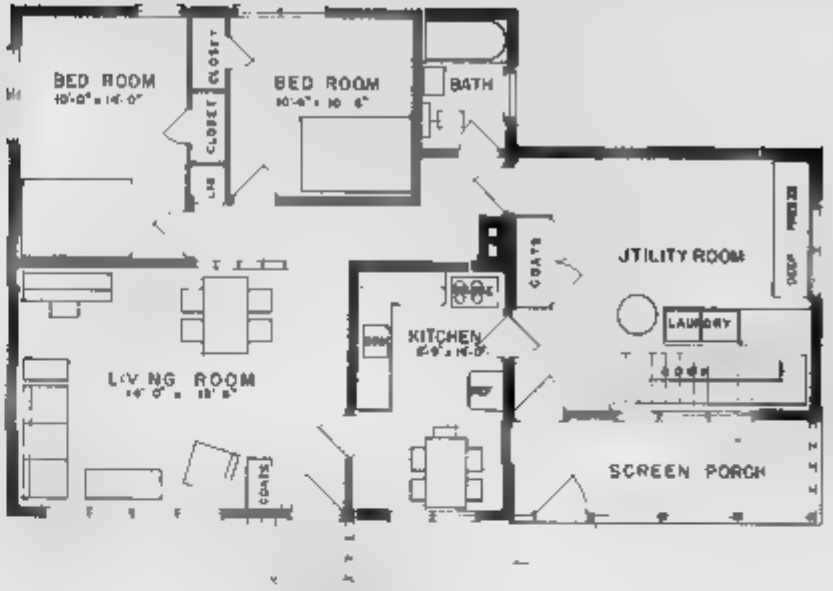
The locations of entrances to the house have been changed. Where formerly there was but one entrance, there are now two new entrances, placed close together on the north side of the house One is at grade level and provides direct access to the utility room and basement, the other opens into the living room Such an arrangement places both entries conveniently It also does away with the unused "front" entrance found in so many farm houses The original all-purpose entrance has been replaced by a window, thereby providing light in the utility room

A concrete block garage is built close to the new entrances, the roof of the garage protecting these by its extension to the house

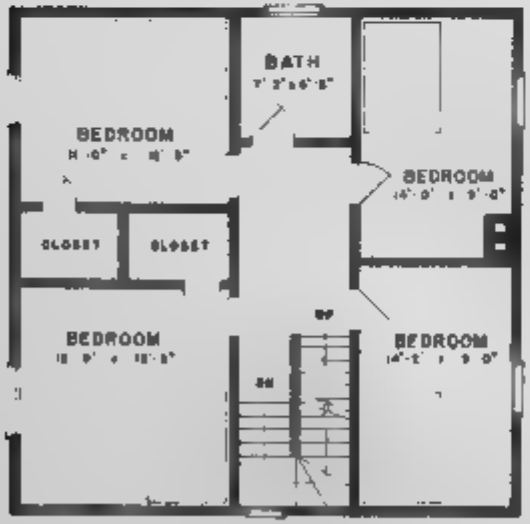
The remodeled house to some extent retains its original appearance The roof is unchanged and the siding on the second storey matches the original siding on the first storey The garage becomes an important feature of the remodeled house, effectively balancing the compactness of the two storey structure



FIRST FLOOR PLAN BEFORE



FLOOR PLAN AFTER



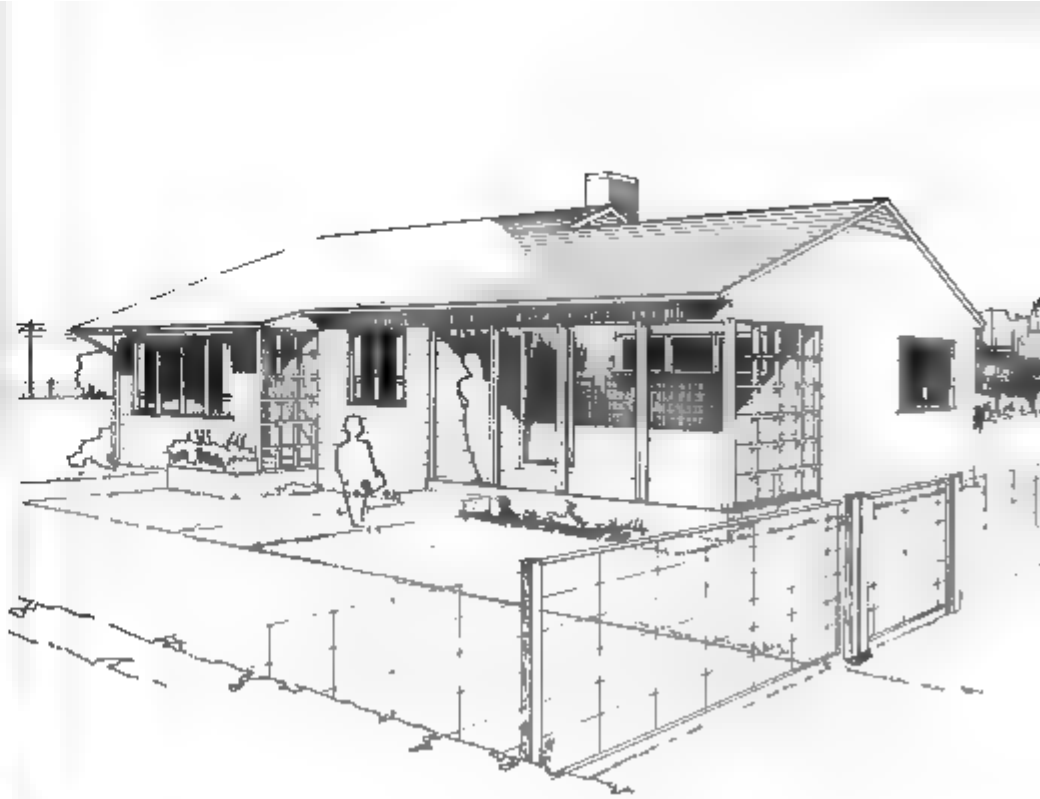
SECOND FLOOR PLAN BEFORE

A TWO STOREY HOUSE BECOMES A BUNGALOW

This is an example of a house which is too large for the family occupying it For some years, the second floor has not been used The ground floor plan, however s not conven ent for all the fami y living requirements. It has been dec ded to convert th s large two storey rame house nto a comfortabie bungalow having two bedrooms and a bathroom

The original house is constructed on a basement foundation which is sti l in good condit on. The roof and second storey can be removed and the materia salvaged Few renovat ons need be made to the first storey Some partit ons must be re arranged New w ndows wi l provide ncreased l ght W ndows in many o d houses are ncorrect y placed and are il fitting, new windows of better construction represent an economy and, as wel help to improve the appearance of a remodeled house

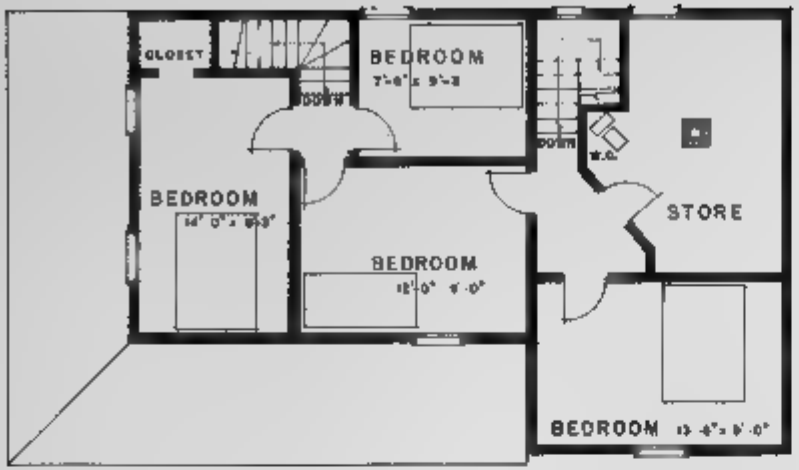
View from Southeast BEFORE



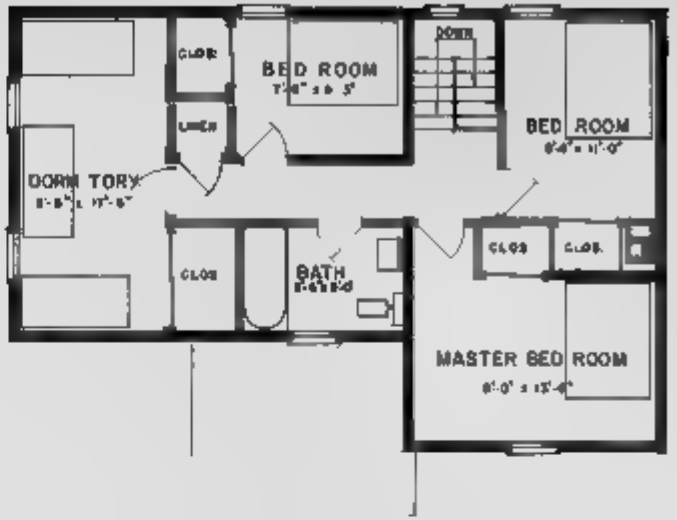
View from Southeast AFTER

Alterat ons in the floor plan are easily arranged. The screened porch is changed to the extent of adding new removable floor-to-ceiling screens The arge utility room continues to serve the same uses but wi include the base ment stairs directly nside the back door This room is comp etely modernized with running water at the laundry tubs, built-in cupboards, and a large deep-freeze unit From the uti ity room there is one door into the kitchen and another door into the bedroom hall, the atter providing direct entry to the bathroom from the back door

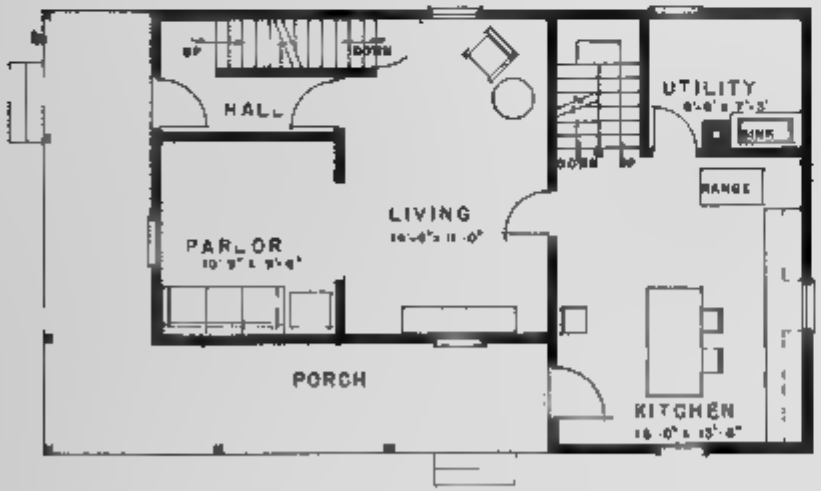
The former living room was situated on the north side of the house and as a result, was poorly lighted. The new living room occupies the area formerly ass gned to the parlor and stair hall. This presented an opportunity to install wide windows on the south wall, thus making maximum use of natural l ght Note how the roof overhangs the south w ndows protecting the glass from the hot summer sun. Two new bedrooms on the north s de complete the re qu rements of the new plan. In plan and appearance, the remode ed house compares favorably, at a fraction of the cost, with a new house



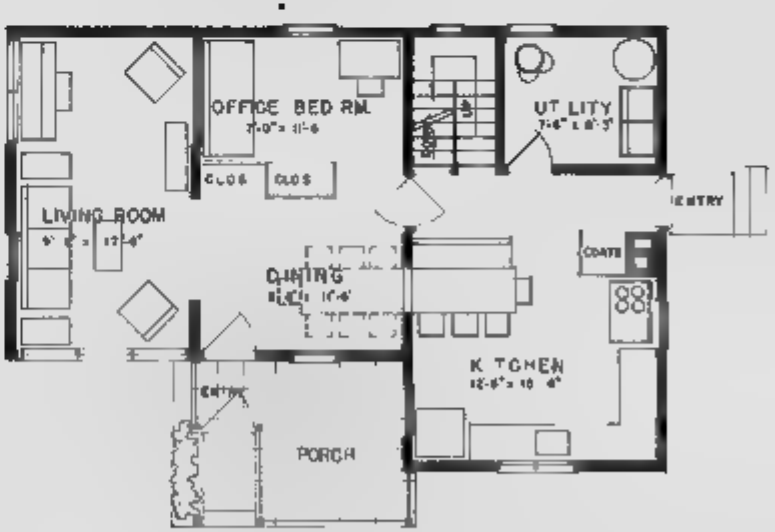
SECOND FLOOR PLAN BEFORE



SECOND FLOOR PLAN AFTER



FIRST FLOOR PLAN BEFORE



FIRST FLOOR PLAN AFTER

A TWO STOREY HOUSE REMODELED FOR A LARGE FAMILY

This is the home of a larger than average family. It was built in two stages, the front wing about fifty years ago and the rear wing a few years later. Because it provides neither efficiency nor comfort for a family of nine, the house is in need of repair and modernization.

Certain obvious changes should be made to the house plan. The size of house does not justify two sets of stairs. In fact, the front stairs have seldom been used since the back part of the house was built. Were they to be removed, needed space would be available on both floors.

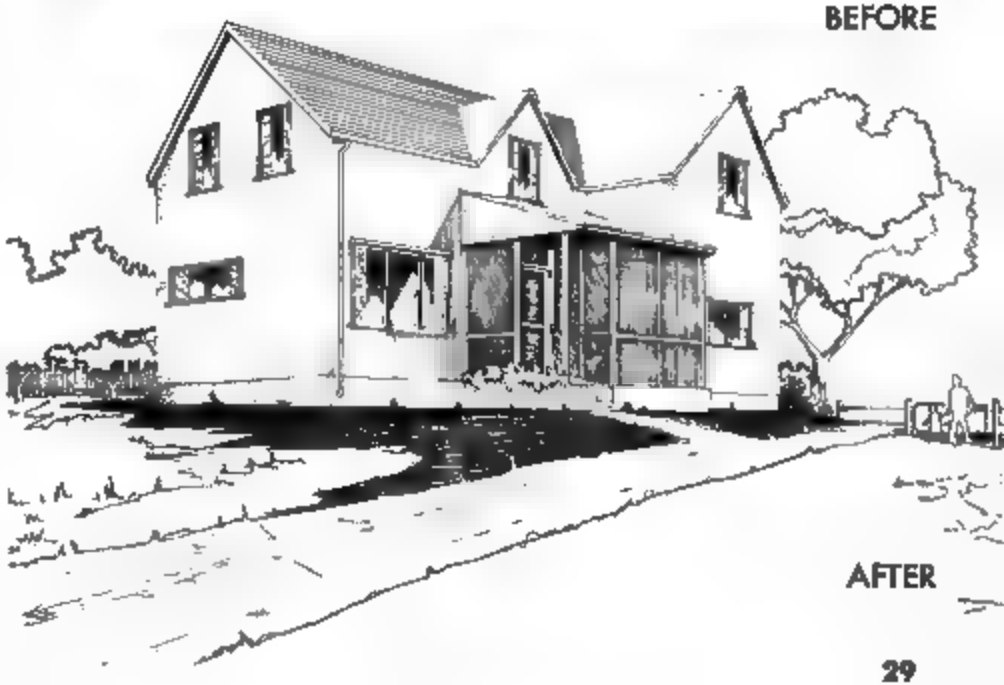
By remodeling, several other difficulties can be overcome. For example, the position of the chimney upstairs makes impossible the use of one room as a bedroom. The upstairs hall should be extended so that all bedrooms are directly accessible from the stairs. At present, one bedroom doubles as a corridor. On the first floor, the present location of the rear entrance is too far removed from the utility room.

Slight alterations are required to eliminate these shortcomings. Both entries should be moved to more convenient locations. Removal of the front stairs will allow a low space for a larger and more useful living room. The chimney should be re-built in a location which takes up the minimum space on both floors. In the re-planning, a complete kitchen layout and a new feature, an office-bedroom, is provided on the ground floor.

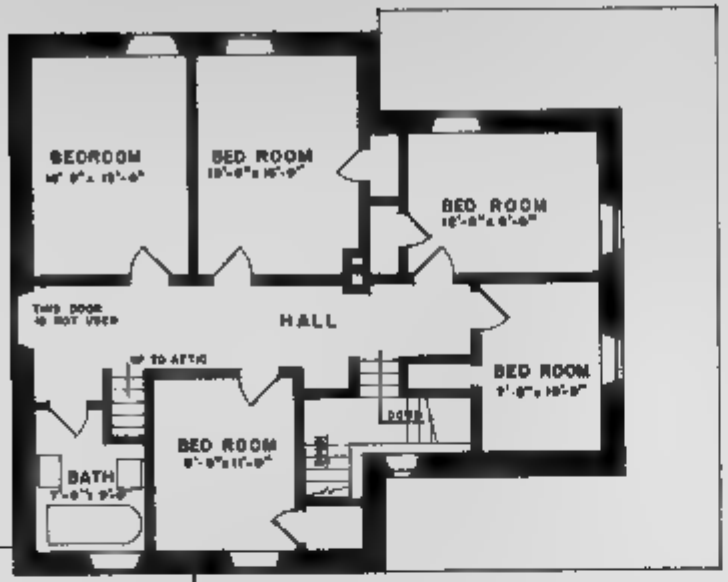
It is planned to enlarge the bedroom above the living room and to equip it as a dormitory for the younger boys of the family. The bedroom which formerly doubled as a corridor is to be partitioned to provide a three-fixture bathroom and a corridor. Originally there were not enough closets. Each bedroom now contains a large closet.

Exterior renovations include replacing the verandah, which had fallen into a state of disrepair, by a compact screened porch. Stucco will replace the badly weathered siding, and a new shingle roof and eavestroughs complete the remodeling.

BEFORE



AFTER



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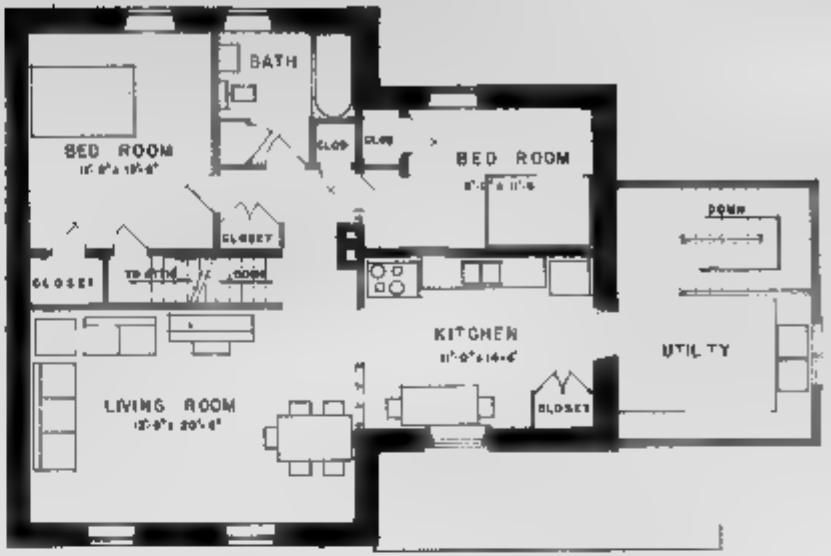
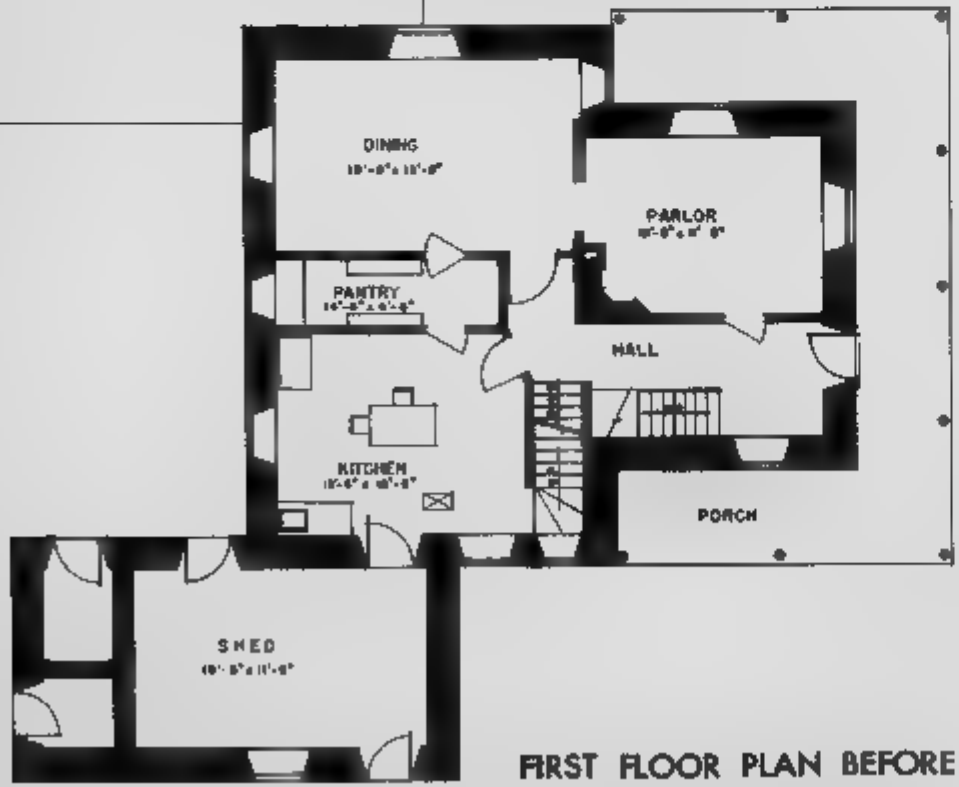
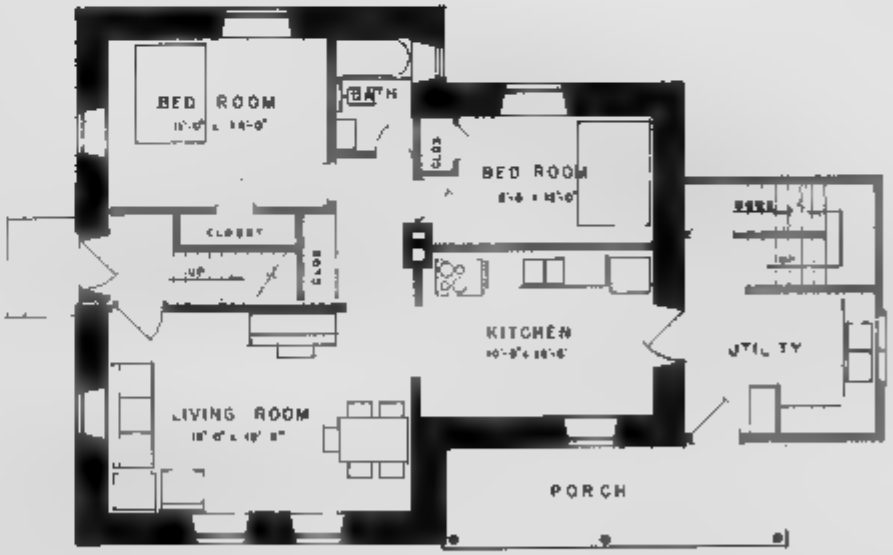


SECOND FLOOR PLAN AFTER



FIRST FLOOR PLAN BEFORE



FIRST FLOOR PLAN AFTER

A DUPLEXED HOUSE FOR THE TWO FAMILY FARM

Today many farms in western Canada are operated as partnerships, as a rule, by father and son or by two brothers. Accommodation for two separate households is usually required and, if the existing farm house is sufficiently large and well built, duplexing may be a logical solution.

The house shown on these pages is a large stone structure, typical of many farm dwellings built about four decades ago, to stand solidly for many years. It is too large for one family. In fact, as the remodeled plans show, there is adequate space for a fully modern two bedroom apartment on each floor. Occupants of the lower apartment have the use of the basement, while the large, well-ventilated attic is an advantage to those who live upstairs.

The stone shed which has broken away from the house must be removed, thus leaving the house ready for remodelling. As great difficulty is normally encountered in altering openings in masonry walls, the re-planning of the house was carried out in such a manner that only the main entrance and the window in the second floor kitchen required extensive alterations to the stonework. The exterior appearance of the house was modified by the addition of a two storey frame extension providing a utility room on each floor.

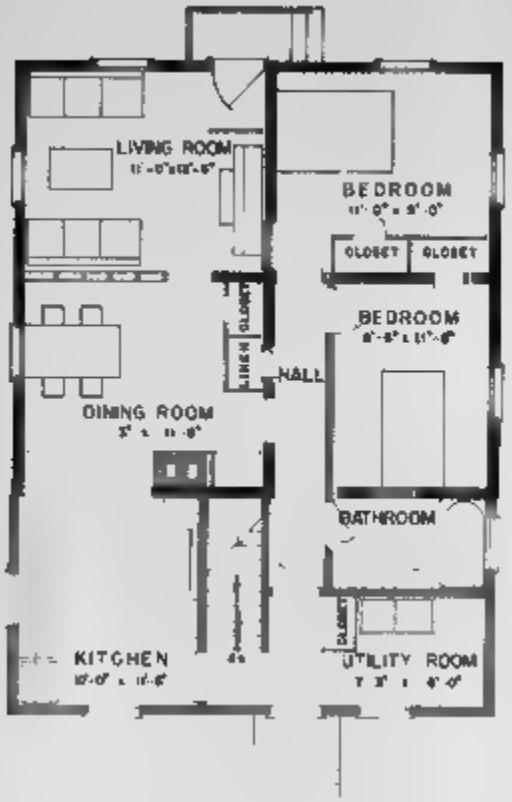
Surprisingly, interior alterations are not excessive. The cumbersome fireplace is removed and the stairs relocated because they took up too much space. At the same time the front entrance is moved from the east to the west side of the house.

The designs for the apartments are practically identical. The rooms are spacious and are so located that living areas benefit from southern exposure.

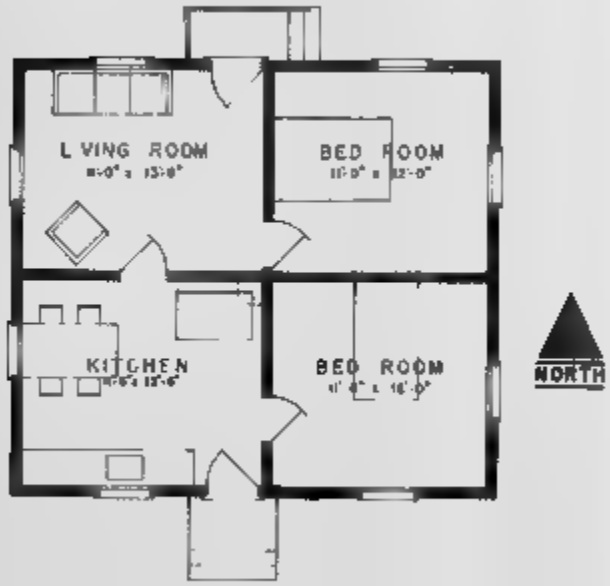
At minimum cost, the original house is converted into two modern living units, a practical expedient on a two family farm since maintenance costs are less than for two houses.

View from Southwest—BEFORE

View from Southwest—AFTER

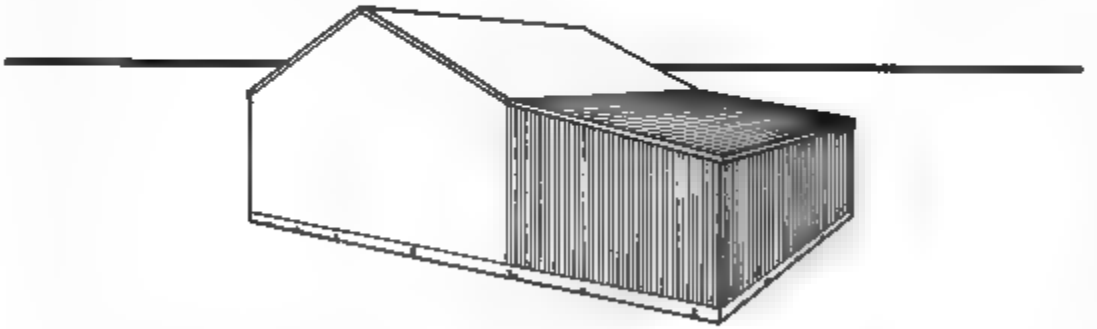


FLOOR PLAN AFTER



FLOOR PLAN BEFORE

ADD A LEAN-TO TO THE COTTAGE



In the prairie provinces there are many small four room cottages sim lar in plan to the one illustrated here Typically, they consist of four rooms of approximately equal size; two of them bedrooms, one a living room and the other a kitchen There are no c osets and litt e privacy or convenience Simp e but effective remode ing can transform this type of sma house into an up-to-date residence

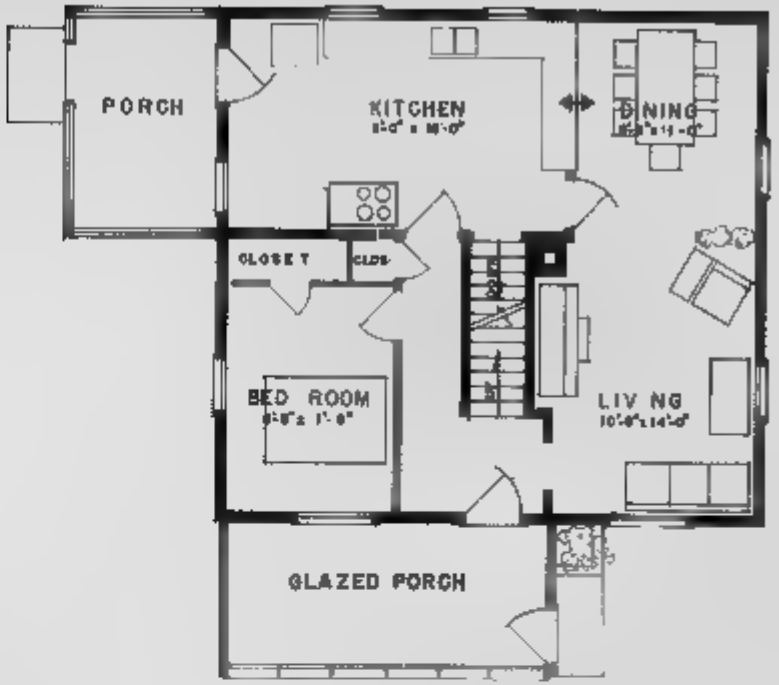
Previously without a foundation, the remode ed house is set on a full basement and equ pped with a warm air furnace A lean-to addition at the back of the house provides the extra space necessary for a bathroom, a utility room and a new kitchen The bedrooms are accessible either from the uti ity room or the din ng room through a new corridor Several useful c osets are located conveniently throughout the house The remodeled plan compares favorably w th those of many new houses.

A FEW ALTERATIONS MAKE THE HOUSE MORE COMFORTABLE

The plan layout of many large farm houses is unsatisfactory. Illustrated on this page is the ground floor plan of a two storey rectangular house. It is inconvenient in almost every respect. The kitchen work counters are too far from the dining room. The bedroom is accessible only from the kitchen, and the living room is reached from the rest of the house through the front vestibule.

Few changes are necessary to transform the plan into an efficient and convenient arrangement. The awkward locations of the dining room and bedroom suggest that they be interchanged. A serving counter and pass-through built between the kitchen and new dining room establishes the necessary close connection between these two areas. The partition between the new dining room and living room is partially opened. The area of the former dining room is sufficient for a corridor and a sizable bedroom. This bedroom now has an element of privacy and is closer to the bathroom on the second floor.

The addition of a glazed porch is optional.



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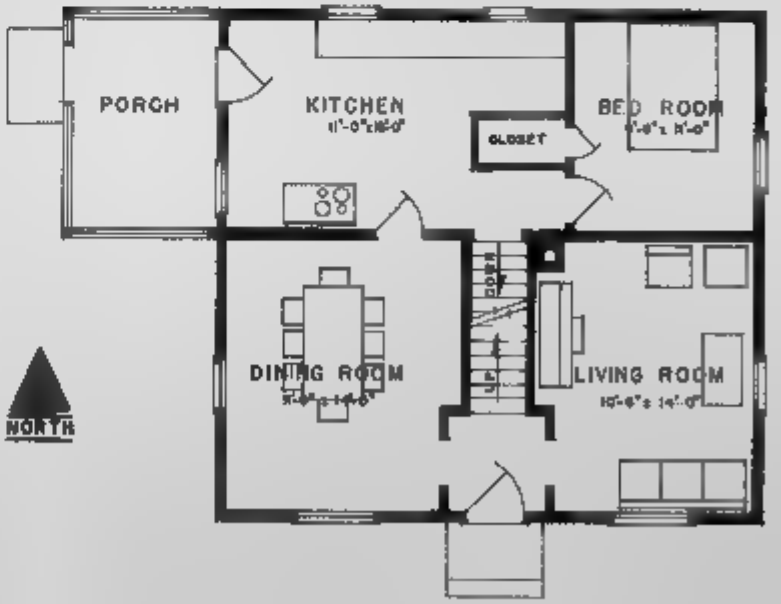

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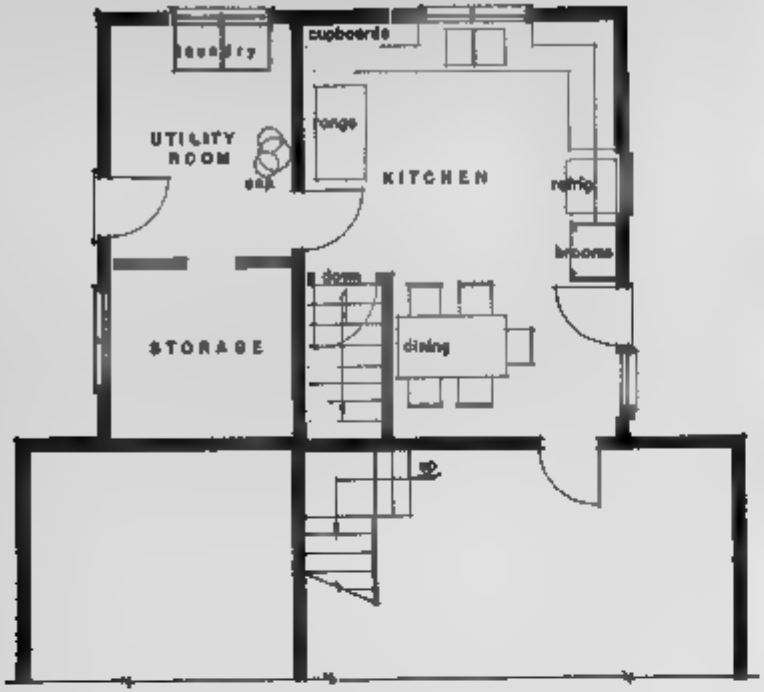

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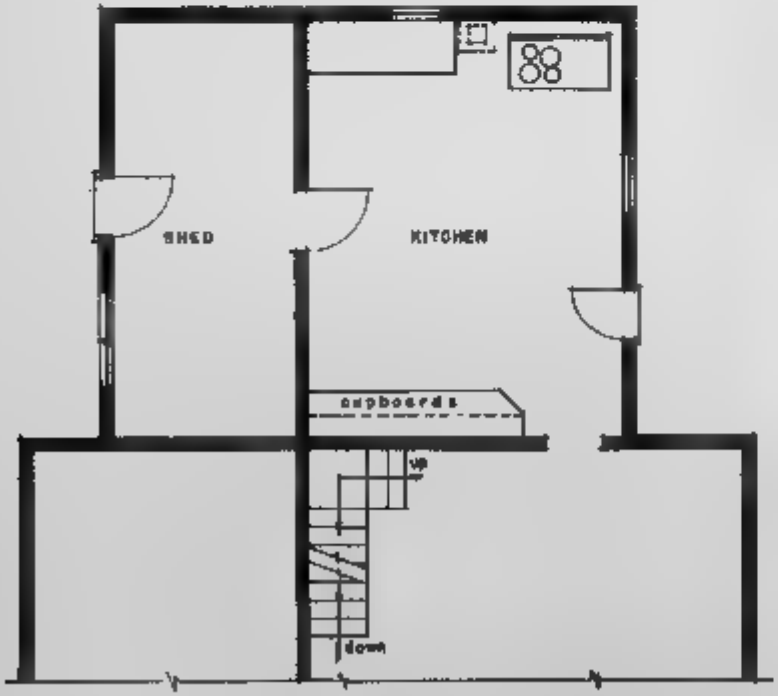

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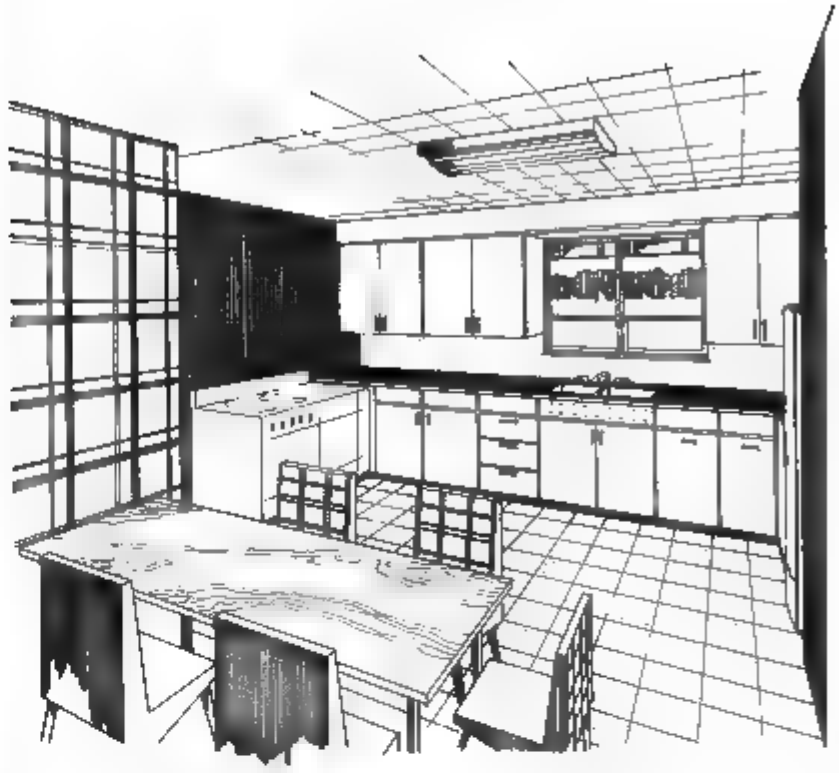
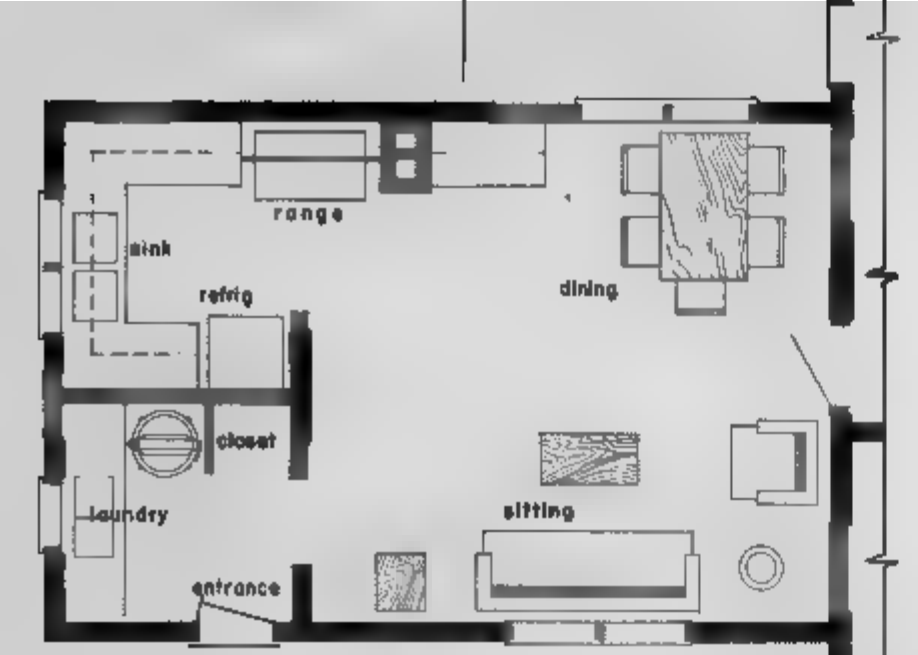


AN ELECTRIFIED KITCHEN

Extension of rural power lines brings electrification to many farm kitchens annually. This means that farm kitchens are being equipped with electric ranges, refrigerators, washing machines, irons and other electrical facilities. These facilities alone do not make a good kitchen. Carefully planned cupboards, shelves and windows are necessary to complete the modern kitchen. The kitchen illustrated here is an example of easy adaptability. New windows are a necessity. New stairs should be constructed, leading from the kitchen to the basement. The old shed is fitted as a store room and utility room. In this way, a major transformation takes place. Electrical equipment is expensive but cupboards, new windows and refinishing can be obtained for a few hundred dollars.



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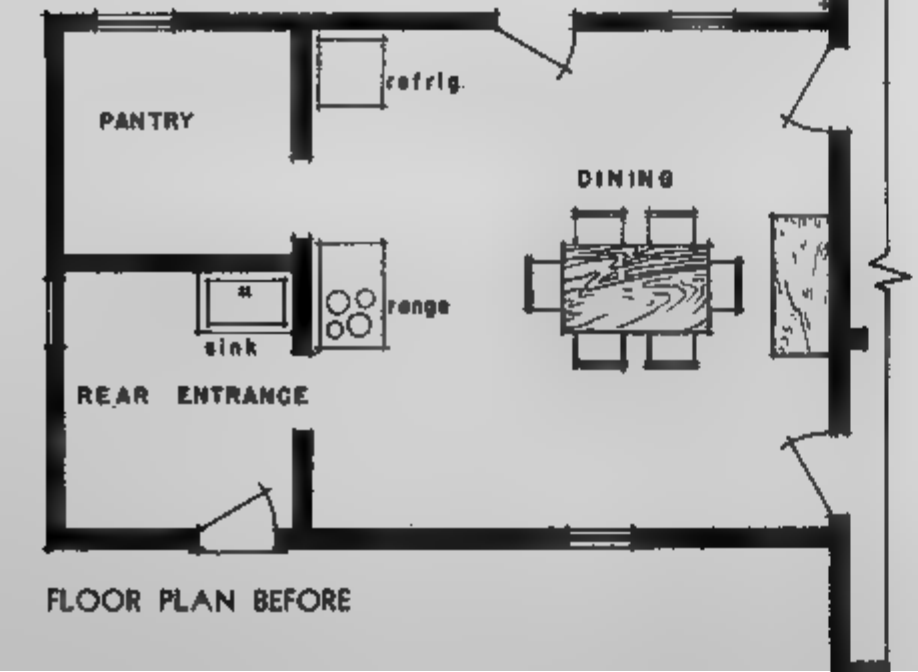

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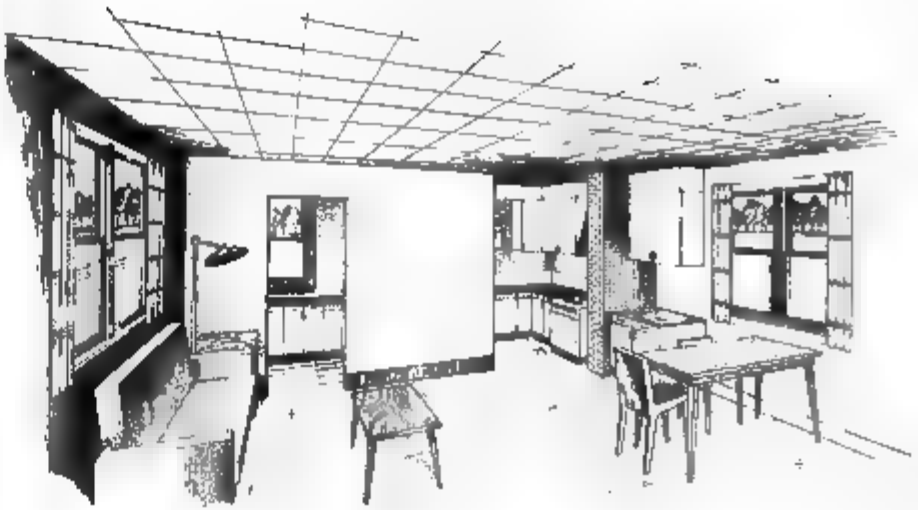


A FAMILY SIZED KITCHEN

An all-purpose farm kitchen should be spacious because of the many activities it must accommodate. Another necessity is thoughtful planning of the areas for the preparation of foods, for dining and for relaxation. The problem, then, is to reorganize the kitchen so that each activity is allotted an appropriate portion of the space.

The accompanying plans illustrate alterations to a kitchen of this type. The former pantry has been incorporated into the new kitchen, making possible a "U" shaped food preparation centre with ample cupboard space. Remodelling is completed by eliminating certain doors, by using larger, more conveniently placed windows, and by applying new interior finishes.

SOME TYPICAL BATHROOM LAYOUTS

Few of the older farm houses were planned to include a bathroom Subsequently, when the decision to install a bathroom is made, there is invariably some difficulty in deciding its location The bathroom in a farm house should be in close proximity to bedrooms and, wherever possible, easily accessible from the back door

A large closet, or an area partitioned off from one of the larger bedrooms, may be converted into a bathroom If it is intended to add a kitchen or utility room to a house, the bathroom may be planned as part of the addition In this way, plumbing fixtures may be placed on both sides of a common wall The illustrations on this page are of five different bathroom plans, having regard for the minimum areas into which fixtures may be fitted Figure (1) shows a two-fixture washroom. A minimum three-fixture layout with plumbing on two walls is shown in Figure (2), while Figure (3) shows the same accommodation with plumbing on one wall Figure (4) illustrates a plan with a shower The last plan, Figure (5), is larger than the others, the bath tub being placed lengthwise in the room

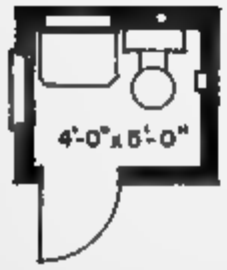


Figure 1

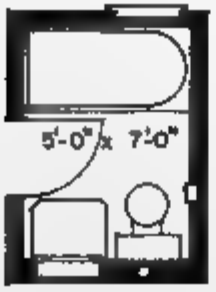


Figure 2

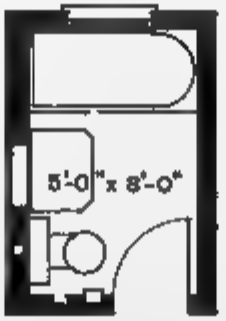


Figure 3

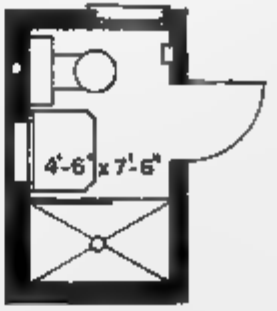


Figure 4

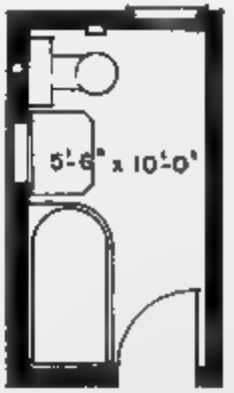


Figure 5

CONSTRUCTION PROBLEMS

Remodeling creates many problems in construction and repair. The following pages deal with some of the more common problems and illustrate a number of ways in which they may be overcome.

FOUNDATIONS

Many western prairie farm houses have been built without basements or foundations. Usually, the first construction step in remodeling is to excavate a basement and construct a suitable foundation.

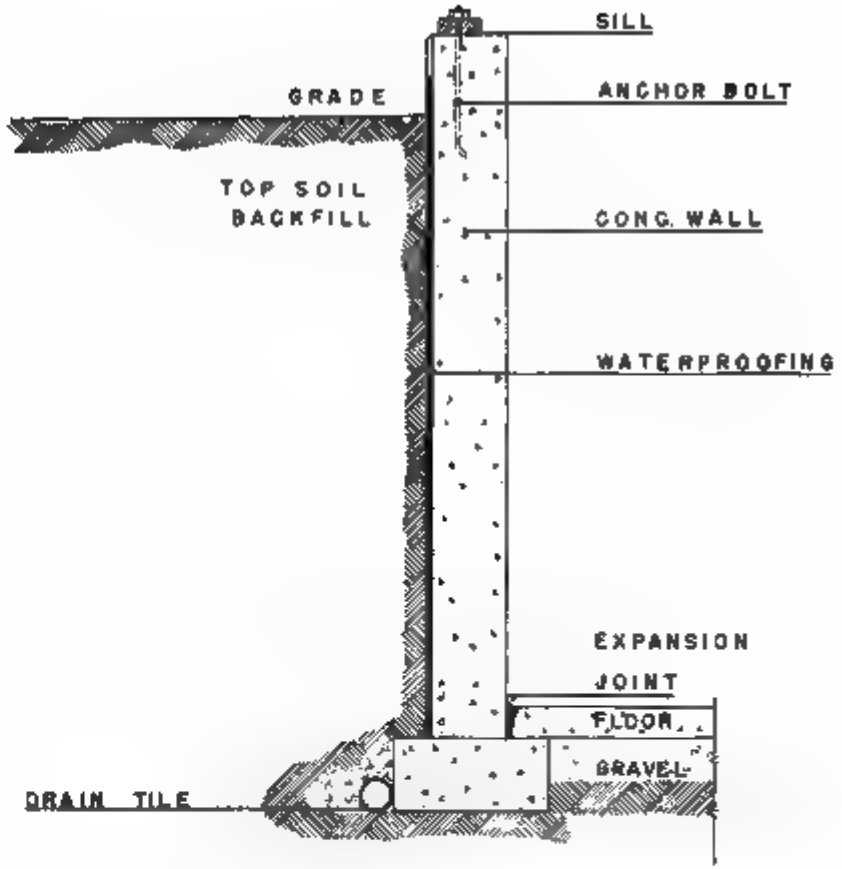
Importance of Footings

Heaving and uneven settling of structures are major building problems in western Canada. Solid footings under foundation walls will help to prevent heaving and control settling.

There is no fixed rule for determining the size of a footing but in general it should be twice the thickness of the wall it supports and as deep as the wall is thick. For example, a twelve inch thick wall would require a footing twenty-four inches wide and twelve inches deep.

In most communities, it is possible to rent a powered mixer, the best means of mixing concrete. Most of these mixers have a capacity of three and one-half cubic feet. Concrete should not be allowed to stay too long in the mixer because of its tendency to separate and to form a material of uneven consistency. As it is placed in the forms it should be tamped with poles or shovels so that all parts of the forms are filled uniformly (especially under basement windows). When a foundation wall is not well tamped, patches of exposed stones will show on the surface. These patches weaken the foundation and are difficult to waterproof.

If possible, concrete pouring should be a continuous operation. Work started one day should be completed that same day. However, if this is not possible and a join must be made in the concrete, the best way to ensure water tightness is to dampen the surface of the initial pouring, sprinkling cement powder on it so that a firm join can be made when the fresh mix is poured.



Foundation Wall and Footing

The diagram above illustrates the principal requirements for the construction of a foundation wall. The wall is erected on a previously poured footing. The wood sill is fixed to the top of the concrete wall with bolts which are placed at regular intervals in the concrete before it hardens. The foundation is waterproofed on the outside surface and drained by means of weeping tiles at the level of the footing.

Basementless houses may be supported in one of three ways. The first is on a continuous foundation wall of concrete or masonry which goes down below frost-line. The second is on wood beams supported on concrete piers which are situated at intervals around the house perimeter. These piers also go down below the line of frost. In the third method, the house sits on large timbers which lie on the surface of the ground.

Drainage and Waterproofing

It is scarcely necessary to stress the importance of good foundation drainage. Some localities in the west are not affected by sub-soil water and seepage, but it is a real problem in most districts.

A coarse gravel fill around the foundation and under the basement floor normally assures adequate drainage. Excess water should not be allowed to stand around foundation walls and beneath the floors. A system of weeping tile drains should be laid around the exterior of the footings and under the basement floor to collect excess water and to carry it away from the house, preferably to a dry well.

Good concrete is relatively waterproof. However, as an added precaution, all concrete work below ground should be coated with a waterproofing material. This may be done by covering the exterior of the foundation with a cement plaster coat composed of one part cement and two parts sand. There are various manufactured asphalt waterproofing compounds available which can be applied directly to the concrete surfaces. These products are effective waterproofing agents and require no special skill in application. Before waterproofing, cracks and holes should be filled with cement.

If it is not practical to apply waterproofing to the exterior of a foundation, it may be applied to the inside surface. This will effectively stop penetration of water to the basement but will not prevent water freezing in the concrete itself. Repeated freezing is likely to produce deterioration in concrete.

Building a Foundation Under a House

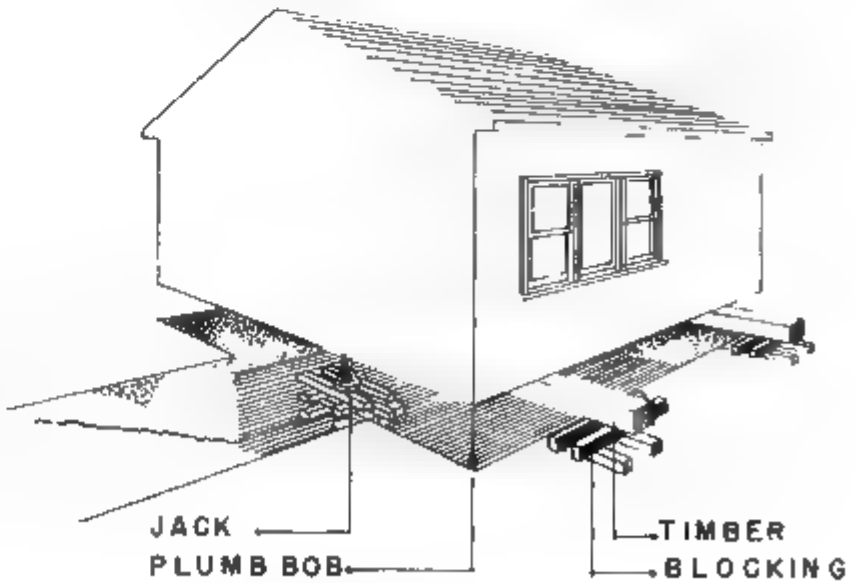
If it is intended to set a house on a foundation, the excavation may be made more easily on a site other than that on which the house stands because the new foundation can be built and new sills installed without hindrance. A foundation wall may be constructed immediately under a house when it is undesirable to move the house to a new location. The disadvantages of this method are the additional labor involved in raising the house and the awkwardness of working under it.

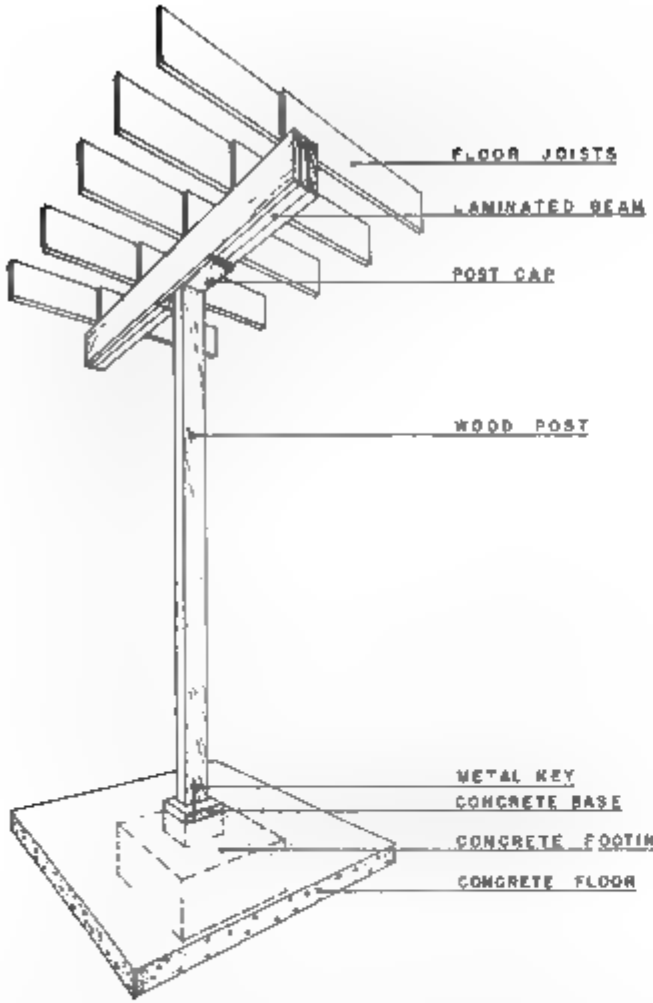
If a basement is desired in the remodeled house, each foundation type presents different problems which must be solved before the basement can be properly installed. Some examples and possible solutions are listed as follows:

If the house is on a continuous masonry foundation wall, it might be necessary to excavate and construct a basement on an entirely different location, and to move the house to this new basement foundation. If this is not considered practical, the house may be raised with timbers and jacks to a height sufficient for a basement. The foundation walls can then be built up with brick or concrete block to this height and the timbers and jacks removed. This method does away with the problem of excavation and although it may not enhance the appearance of the house, it is really the most logical solution.

If the house is supported on wood beams on concrete piers, it can be jacked up and supported on timbers (see diagram). With this arrangement excavating can be done freely, formwork erected and basement walls poured. The original concrete piers and wood beams will be removed during excavation, as they will be replaced by the concrete foundation wall.

If the house has no masonry foundation, i.e., if it sits on heavy timbers, the problems of installing a concrete basement are few. The timber supports can be jacked up, raising the house to a sufficient height to enable excavators to work freely. After excavation, the basement walls can be poured and the house lowered to the new foundation and the timbers removed.





BASEMENT BEAM AND POST

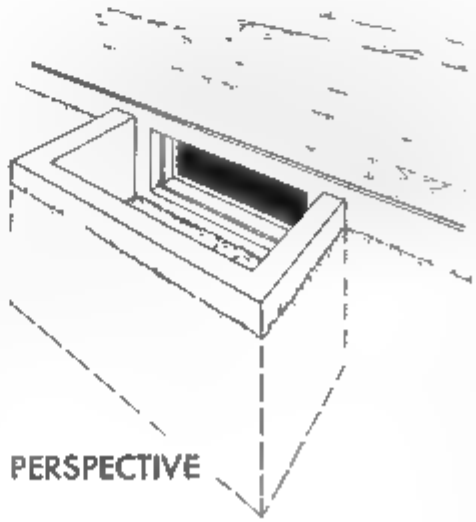
Wood posts supporting basement beams are usually six inches square. The foot of a wood post should be supported by a concrete base raised at least three inches above the basement floor. A post resting directly on the floor is subject to the rotting action of moisture. Each post should be keyed to its base by a short iron rod.

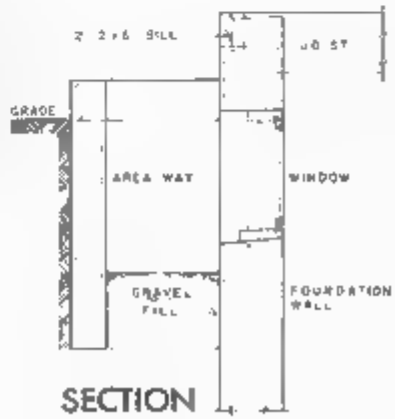
Most basement wood beams are built of several pieces of lumber laminated to form the size of beam required. For example, a six inch by ten inch beam consists of three pieces of 2" by 10", nailed together. For long beams the lumber should be butt-jointed and these joints should be staggered and no closer together than half the distance between spans.

In order to minimize uneven settling of a house the basement beam should be supported by a minimum number of posts. Therefore, the beam should be as large as is practical. Generally, wood beams will be six inches or eight inches wide and ten inches or twelve inches deep.

WINDOW AREAWAYS

In order to provide natural light in a basement, it may be necessary to place the sills of windows below grade. When this is done earth must be kept away from the window by means of concrete or metal walled areaways. The accompanying diagram shows how a good concrete areaway should be constructed. The gravel fill at the bottom is a most important feature because it assures proper drainage of the area.

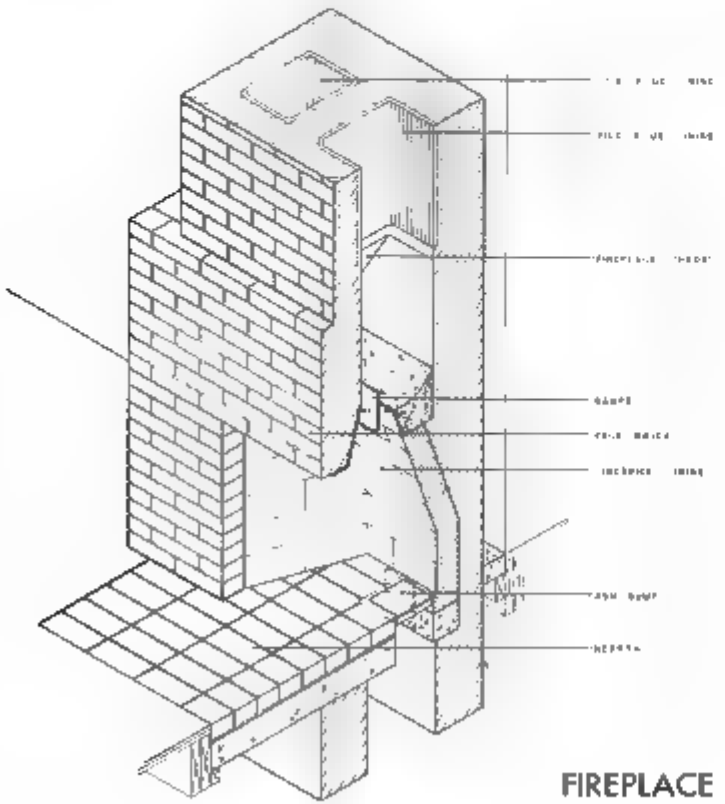




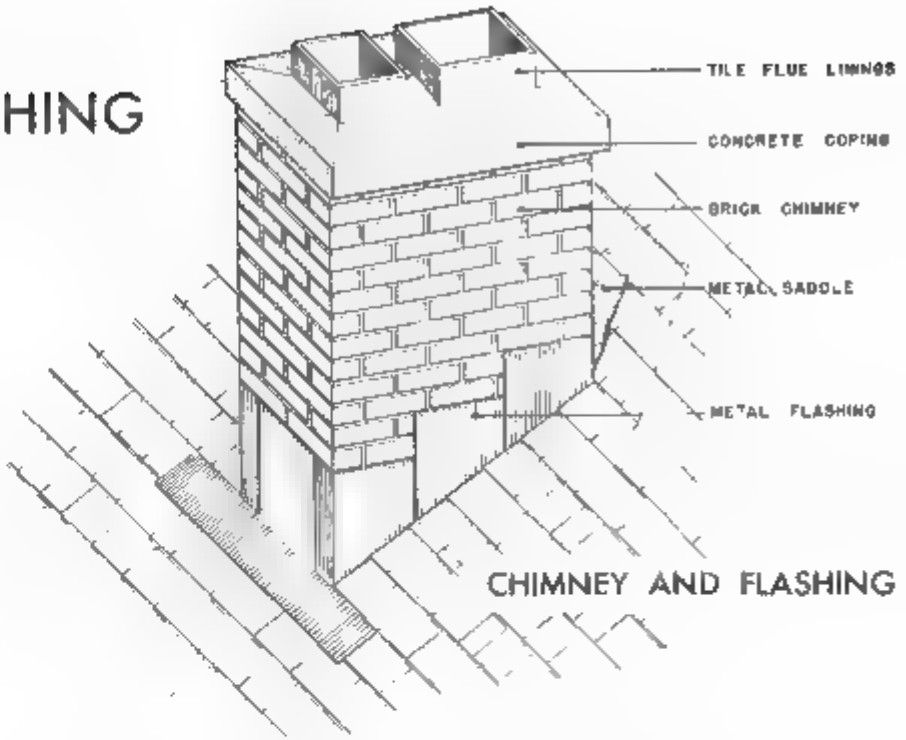
FIREPLACE, CHIMNEY AND FLASHING

The diagram illustrates a cut away view of a fireplace. The various parts are clearly illustrated.

Much of the heat produced in any fireplace goes up the chimney. There are several types of inexpensive fireplace boxes manufactured from boiler plate steel, which circulate warmed air through a room, thereby increasing the efficiency of a fireplace as a heating unit.



FIREPLACE



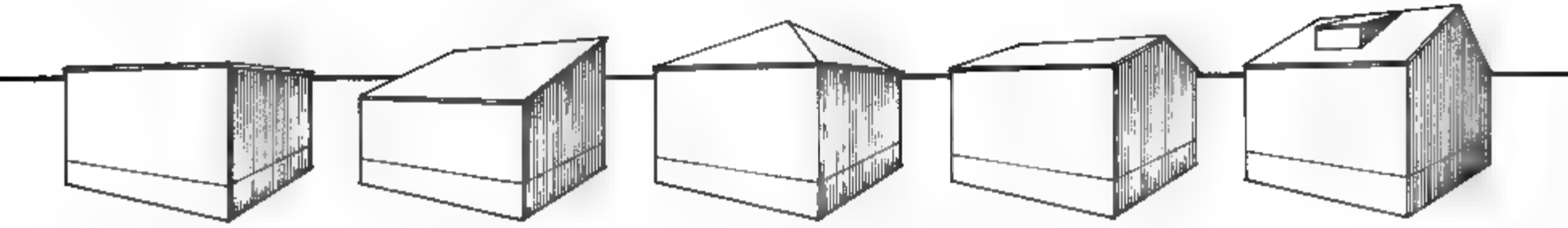
CHIMNEY AND FLASHING

Illustrated here is a chimney top properly flashed with sheet metal. As flashing materials are subject to severe weathering conditions, the best grade available should be used. Twenty-six gauge galvanized iron is a recommended material for durable flashings.

Joints in roof construction are best weatherproofed with sheet metal flashing. Galvanized iron and sheet copper are the most common flashing materials. However, galvanized iron is used much more widely than copper because it is a cheaper material and extremely durable.

A large proportion of remodeling includes chimney construction and repair particularly when new basement furnaces are installed. A brick or concrete block chimney should have a tile flue lining, with a separate flue for each fire. For example, if a furnace and kitchen range both use one chimney, there must be two flues in the chimney. Tile flues are usually rectangular. A minimum size of eight and one half inches by thirteen inches is recommended for the furnace flue of an average sized house.

VARIOUS ROOF TYPES CAN BE USED



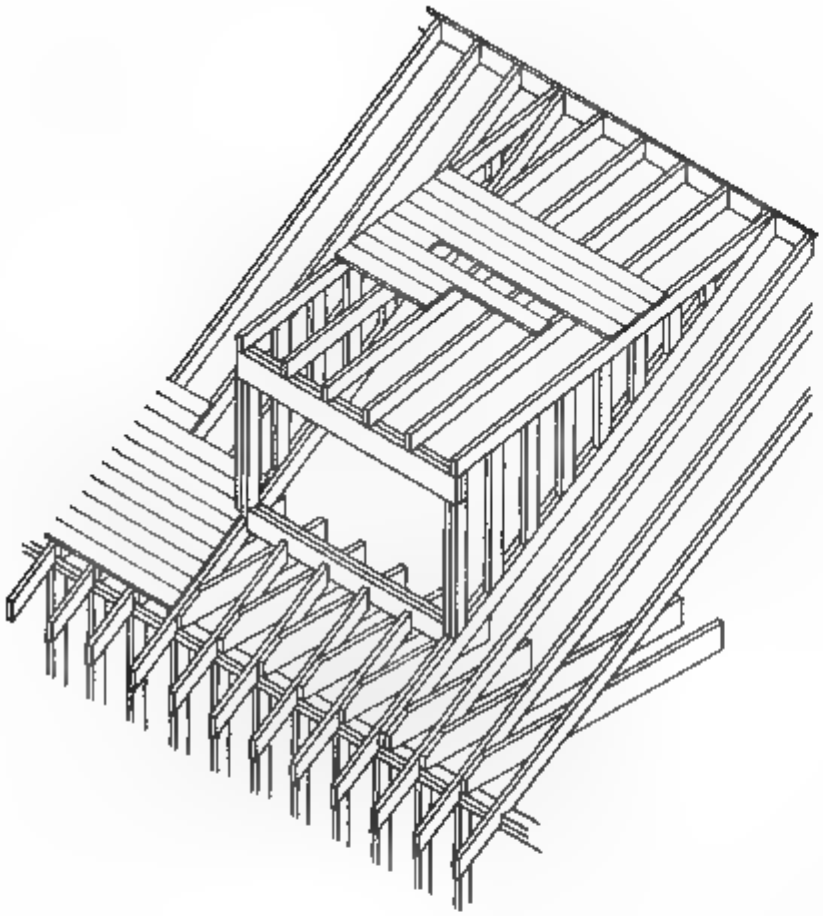
ROOF CONSTRUCTION

The appearance of a house is determined largely by its roof Whether a house s attractive or not may depend on the design of its roof Such an integra feature should harmonize with the balance of the structure It should be free of complications and unnecessary adornments

Five basic roof types are illustrated at the top of the page These are accepted and proven roof types for western Canada Although they d ffer in character each type is attractive when used appropriately

Few bui d ngs are designed as simply as those illustrated, sometimes several roof types are combined in one house For example, a shed roof may take the form of a lean-to in combinat on with one of the other types.

For each roof type specific construction and roofing materials have been developed. A discussion of these materials will be found on page 47



ROOF DORMERS

Dormer windows provide additional habitable space in attics. A common fault of most dormers, in both new and remodeled houses, is that they are too small. A dormer must be large enough to provide good headroom and adequate wall area for windows.

The most useful type of dormer has a simple sloping roof as illustrated in the above framing diagram. Such a dormer will give a generous amount of additional space under the roof and it is easily framed and finished both inside and outside.

GUTTERS AND DOWNSPOUTS

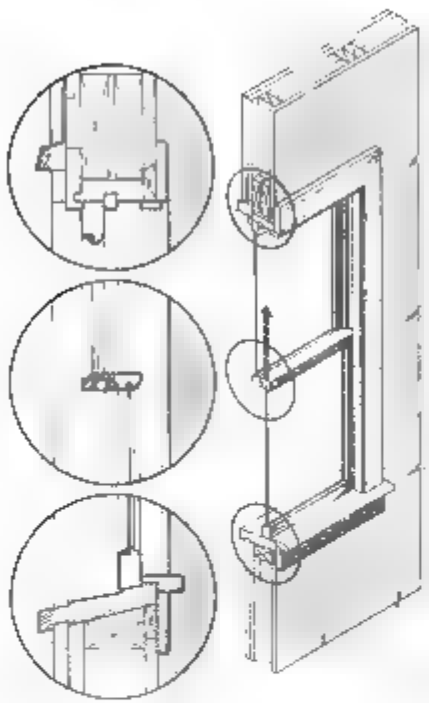
In many sections of the prairies, rain water is the chief source of household water supply. Therefore, an efficient, clean system for collection of rain water from roofs is an important feature of any prairie farm house.

Although gutters may be made of wood, they are usually shaped from metal. Galvanized iron, zinc and copper are the principal metals used for gutters. Metal gutters can be painted to match the color of the house paint or trim. When purchasing metal gutters and downspouts be certain that the material has been prepared for painting.

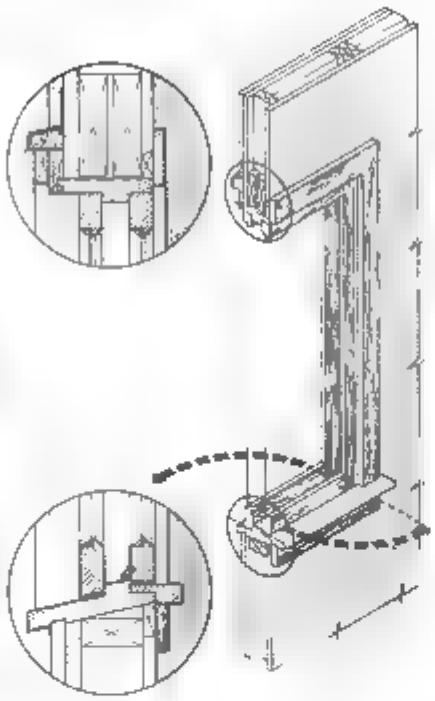
House gutters should measure not less than four inches wide at the top and should be wider if the roof is unusually large. Gutters should be sloped to drain towards the downspouts, and should be supported from the eaves by strong hangers spaced every three feet.

The same metals used for gutters are used for downspouts which are of round or rectangular shape, corrugated to resist the pressure of freezing water. Downspouts should be not less than three inches in diameter or two and one-half inches square. Provide about one square inch of downspout for each one hundred square feet of roof.

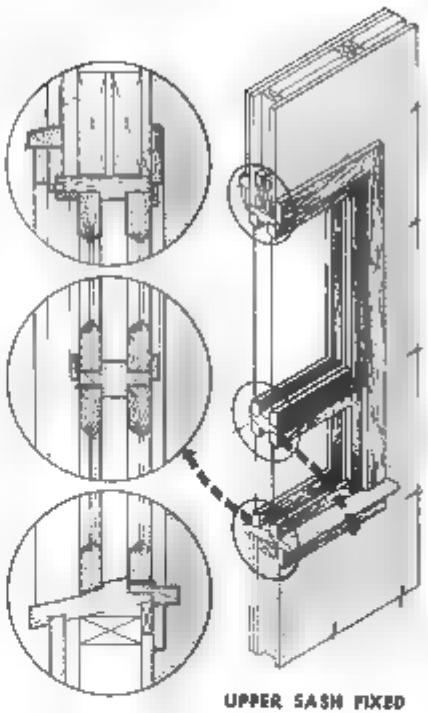
WINDOW CONSTRUCTION



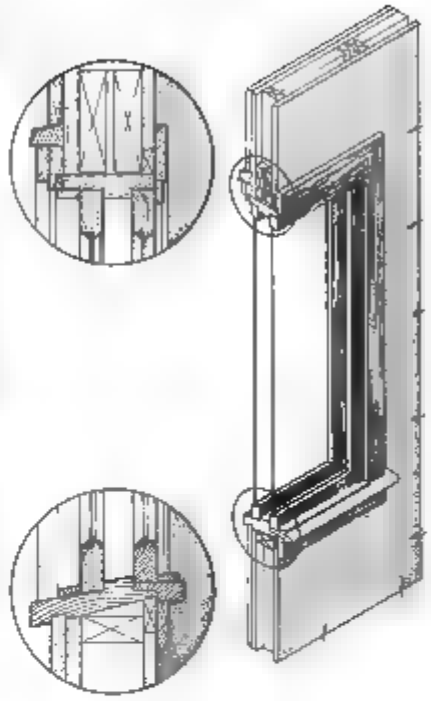
DOUBLE-HUNG SASH



CASEMENT SASH



UPPER SASH FIXED
LOWER SASH OPENING



FIXED SASH

A well designed window must not only admit maximum light, but must also be weatherproof. Windows also provide a means of ventilation. The four types in general use are illustrated.

1. **Double-Hung Sash:** This type has been widely used because of its good weathering qualities. However, it is more complicated and more expensive to install than fixed sash, and the meeting rails may interrupt the view. It opens readily and is easily screened.

2. **Casement Sash:** This window is usually hinged at the side, allowing it to swing either in or out. Casement windows offer good ventilation but are difficult to screen and to weatherproof.

3. **Upper Sash Fixed, Lower Sash Opening.** This combination forms an excellent and popular window. The fixed sash at the top gives clear uninterrupted vision, while the lower portion of the window is hinged either at the top or bottom and may swing in or out. Screens are required only for the lower portion.

4. **Fixed Sash:** This is the most economical type of window and is the easiest to make weatherproof. Obviously, it provides no ventilation.

Most old houses have insufficient window areas. Even on bright days, rooms are not well lighted. Larger window areas are advantageous and are feasible with the improved types of windows available today. The minimum window area necessary for a room is considered to be 10 per cent of the floor area. For example, a room twelve feet by eighteen feet, or two hundred and sixteen square feet floor area, should have not less than twenty-two square feet of glass.

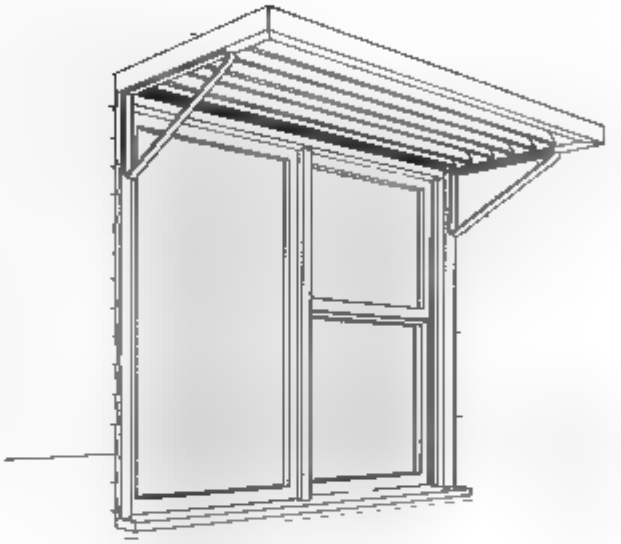
The amount and quality of light admitted by a window will depend on the direction which a window faces. Obviously, windows facing south will admit more light than will similar sized windows facing other directions. To introduce a like amount of light to a room facing north, a larger glass area is needed. However, the north side is colder and correspondingly greater heat losses will occur. Therefore, large window areas should be limited to the south side of the house, and all rooms which benefit most from large window areas should be planned on that side.

When a house is being remodeled, windows present two problems. In the first place, window frames must be reset to accommodate changes in the house plan. Resetting does not necessarily involve work on the frames and sashes but a great deal of labor is entailed in cutting new wall openings and filling in old ones. Wall finishes inside and outside must be neatly matched around these openings.

In the second place, windows which can no longer be used must be replaced. This is so when kitchens or bathrooms are remodeled and new windows of particular types or sizes are required. The problem of refinishing the wall surfaces is also important.

Nearly all windows in older houses fit poorly and are drafty. Good quality weather-stripping may correct these deficiencies, but there are circumstances when it is more economical to install new sashes.

SUN CONTROL



DOORS

Since good quality plywood has become available at low cost, flush panel plywood doors have become popular. They have several advantages over panelled doors, chiefly because they do not collect dust, are more soundproof and, with proper finish, can be made extremely attractive. When new doors are needed in remodeling and it is desired to use plywood doors, old panel doors can be renovated by covering them with sheets of one-quarter inch plywood.

During the hot summer months, windows on the south side of a house will absorb much heat from the sun. An inexpensive wood awning is the best method of shielding windows. An awning built of wood slats regularly spaced at close intervals will prevent the rays of the high summer sun from reaching the glass. However, during winter the low rays of the sun may shine directly through the windows, helping to warm and to brighten the house.

INSULATION

In order to provide max mum heat and comfort, a house must have its exterior walls and ts ceilings adequately insu ated against cold. Insulating materia s are marketed under various trade names, but the main types may be described as fol ows.

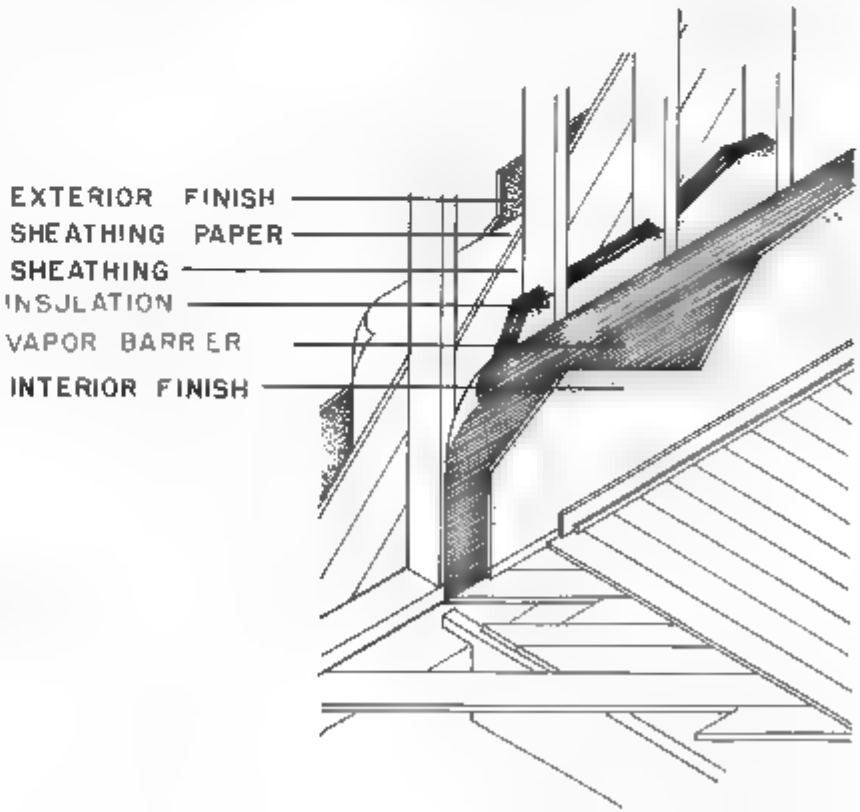
1. Loose fi l insulation inc udes granulated mineral wool and cork, saw-dust, shavings, dried moss and various other patented materials. Unless proper y used oose fi l insu ation has a tendency o settle and to leave an air space at the top of a wall
2. B anket insulation includes minera or glass wool in batts or rolls, usually backed with paper or a width suitab e for fasten ng between the wall studs
3. Rigid insulation. most common type is made of compressed fibre board, but a so nc udes cork board and oamg ass slabs.
4. Reflective insulation. an effect ve but little used type of insu ation wh ch makes use of the reflective properties of aluminum foil

With the exception of a uminum foil, the effect veness of these materials de-pends directly on their thickness
As loose fill nsulation can be blown into wall spaces from the exterior with-out removing interior wa l fin shes, it s most commonly and conveniently used for weatherproofing existing structures. In most rural areas, there are firms which spec alize in the instal ation of this type of insu ation.

VAPOR BARRIERS

Condensation may be a probiem n the insulated house During the winter months. warm air, unless proper y conta ned, leaks through the inner wal When t reaches the outer wal which is cold, the warm a r condenses, and in the form of water settles in the insulation. In time, the accumulated moisture can cause serious decay in both the wood and the insulation material in the walls. Moisture is necessary for comfort and hea th and should not be e imina-ted However, it is possible to prevent it from pass ng through the interior wall surface f a thin waxed paper is carefu ly applied to the inside of the studs be ore the lath or wal board is put in place This waxed paper s cal ed a "vapor barrier The vapor barrier should never be omitted n any new con-struction It is nexpensive and easy to apply If condensation prob ems are present in a house preventive measures are more d ffic u t because the vapor barrier cannot be applied without remov ng the existing inter or wall finish. As an alternative method of reducing condensat on in such a case, interior surfaces can be covered with a waterproof paint

When purchasing bu lding papers, always be sure that the paper is the r ght type Outside and inside papers have very d fferent qua ities and it is im-portant that they be used n the proper ocations.



CHOOSE APPROPRIATE FINISHING MATERIALS

Today there is available a wide variety of building materials to suit every need. While cost plays an important part in choosing materials for new construction or remodelling, it should be remembered that initially inexpensive material may result in high maintenance costs over a period of time.

The following notes on exterior and interior finishing materials may serve as a guide in the selection of most appropriate materials.

EXTERIOR FINISHES

Roofing

1. Shingles. At one time wood shingles were used almost exclusively. Now, wood shingles compete with composition and metal roofing. Better quality composition shingles make a good durable roof when applied exactly as the manufacturer specifies. Metal (galvanized iron and aluminum) roofs are used to particular advantage in areas where rain water is filtered for human consumption.

2. Roll Roofing. This roofing is materially the same as composition shingles, but is manufactured in long rolls. It is economical and may be applied easily but maintenance costs are higher than for shingle roofs and the appearance may not be quite as attractive.

3. Tar and Gravel. This type of finish is formed by first covering the surface of the roof with a layer or two of tarred felt, then spreading a coat of pitch over the roof. On this surface, further layers of felt and tar are laid, then coated with pitch in which screened gravel is imbedded. These roofs are bonded for from five to twenty years depending upon the quality of the materials used and the care with which they have been applied. A tar and gravel finish is specifically suitable for low pitch and flat roof surfaces.

Exterior Wall Finishes

1. Wooden materials, in increasing variety and pattern, make up the major part of all exterior finishes used in western Canada. Bevelled and clapboard siding are most frequently used, while vertical siding is gaining popularity because it is easily applied and has an attractive appearance. Fir plywood is now manufactured with waterproof glues in grades suitable for exterior use and is a clean, permanent finishing material. Cedar shingles have long been used as a wall finish and are as appropriate today as ever.

2. Asbestos siding materials have found general use only in recent years, but have proven to be durable and attractive. Asbestos shingles are particularly suited to houses. There are also asbestos cement board panels which can be applied in a manner similar to plywood panels.

3. Stucco, in a variety of colors and textures makes a durable and economical wall finish. A good stucco job requires little or no maintenance, a characteristic which accounts for its acceptance. The quality of a stucco finish depends on the ability of the plasterer. For this reason, stuccoed houses are best limited to districts serviced by competent craftsmen.

4. Houses of masonry construction are seldom seen in western Canada because brick and stone are expensive materials and there is a pronounced lack of skilled craftsmen. Clay tile and concrete brick are materials occasionally used for wall construction, but most tiles and blocks are not manufactured with a surface suitable for exposure, and so must be finished with stucco.

INTERIOR FINISHES

A good interior finish should be resistant to wear, easy to apply and to maintain, and pleasing in appearance

Flooring Materials

Wood: A good wooden floor is constructed in three separate layers. First, the sub-floor is laid diagonally on top of the joists and nailed in place. The sub-floor is then covered with a layer of heavy building paper, over which the finished floor is laid. The finished floor may be either hardwood or softwood. Oak, maple, and birch are the most common hardwood flooring materials and make a finer quality floor than softwood. Edge-grain fir is the most durable of the softwoods.

Tile: Asphalt tile is a suitable flooring for most rooms. It has good wearing qualities, is easily maintained and is available in a wide color range. Asphalt tile has two disadvantages. It lacks resilience and is subject to deterioration by grease and is therefore unsuitable for use in kitchens.

Rubber tile is more expensive than asphalt tile but has the qualities of resilience and resistance to grease action which asphalt tile lacks, thus making it particularly appropriate for kitchens.

Linoleum: A variety of materials are sold under the general classification of linoleum. The cheapest linoleums are manufactured of burlap or felt with an enameled surface. Superior quality linoleums are made of cork and have greatly increased wearing qualities. Linoleum is used chiefly in kitchens, bathrooms and corridors. Good quality linoleum is designed to withstand wear and should always be used in preference to the cheaper grades.

Linoleum is applied over a felt paper base and may be cemented but never nailed to the floor.

Wall and Ceiling Materials

Plaster: Plaster is the most popular finish material for walls and ceilings. Like stucco, good plaster depends on the availability of skilled craftsmen. There are several types of plaster finishes. Most common is the "hardwall" surface which is trowelled white and smooth and can be papered or painted. "Sand" finished plaster is perhaps the most attractive. In order to secure this finish, the plaster finish is floated but not trowelled. This results in a somewhat roughened surface which can be left plain, or can be papered or painted. There are other specialized plaster finishes attained by working on a finish coat with a sponge or a comb. These finishes are permanently textured surfaces and cannot be changed.

Wallboard: Prepared wallboard panels, known as "dry-wall" construction, are used extensively in districts where plasterers are not available. Wall boards are manufactured in four foot widths and usually in eight or ten foot lengths. Joints are puttied and taped, resulting in a surface as regular and permanent as plaster.

Plywood: Plywood is manufactured in a variety of surface textures designed especially for interior finishing. Fir plywood is most popular. Different types of surfaces are available under various trade names. There are also numerous veneer plywoods featuring birch, oak or cedar surfaces, which are attractive natural finishes.

Basement Materials

Wood: A wooden floor should not be laid directly on the basement floor. The surface of the concrete should be painted with asphalt emulsion and the floor finish laid on two inch by two inch sleepers. If a new basement floor is being poured, sleepers can be set into the concrete.

Earth: Part of the basement floor, if space is required for root storage, can be left unfinished.

Concrete: It is recommended that a concrete basement floor be treated with a patent hardener to prevent dusting. Special paints for concrete surfaces are available in a wide color range. Plastic tile is the only form of composition tile which should be applied directly to a concrete basement floor.

Walls and Ceiling: Wallboards and other wall finishes should be applied on furring strips and not directly on the concrete. The ceiling finish can be applied directly to the under side of the joists.

Painting

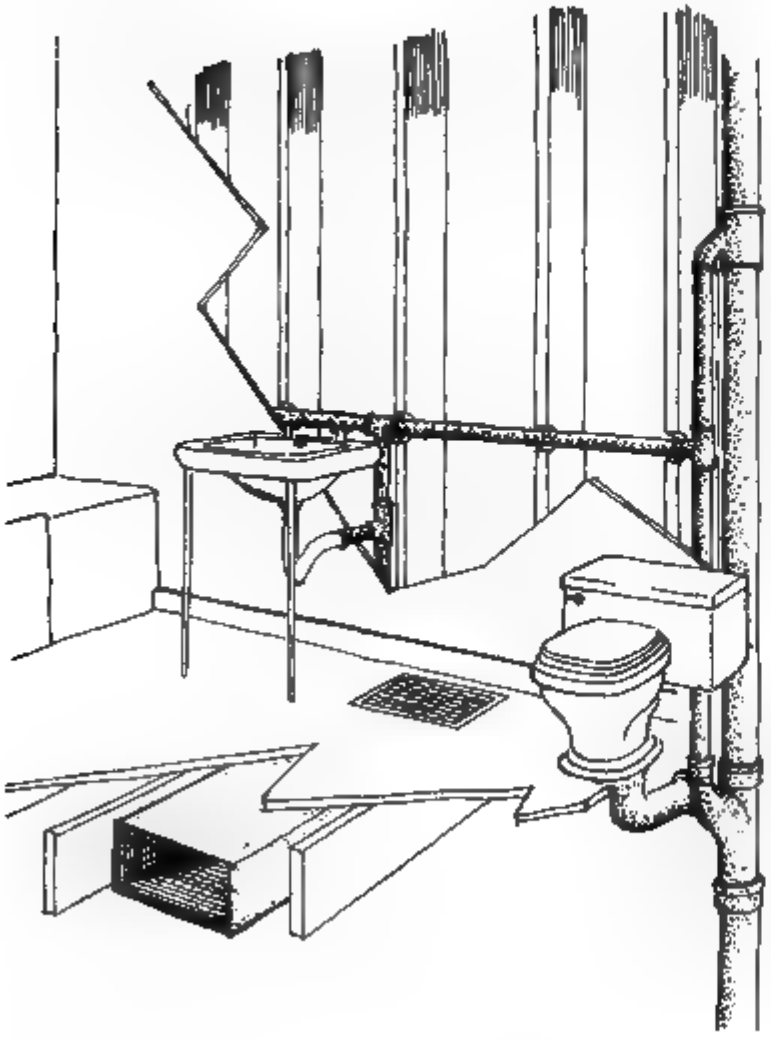
Remodeling is incomplete until a house has been thoroughly painted and trimmed, inside and outside. As a rule, this requires both re-painting old surfaces and painting new wood work.

Instructions for proper application of paint are provided by the manufacturers and these instructions should always be followed.

Best quality paints are a mixture of color pigments in linseed oil. White lead is the main pigment constituent for most household paints. Various other materials are added to give a full range of color tints. These paints are available with finishes ranging from flat to glossy.

There is no advantage to be gained by purchasing cheap paints in which inferior material is substituted for white lead and varying proportions of water are added to the oil. These paints will not last as long as the better paints and usually require more labor to apply. Cheap paints will flake, wrinkle, peel or discolor rapidly and make subsequent re-paintings more difficult.

HEATING AND PLUMBING



Within the wal s and floors of a modern house are the p pes, ducts, and wires wh ch are essential for the transmiss on of heat, water and e ectric power As deta ed information concern ng these subjects may be found in numerous pub- cations, t is the intent on here to note only a few points which are particularly related to remodel ng.

Heating There are three types of heating systems common y used in prair e farm houses grav ty hot water, gravity warm air, and the pipeless furnace Each is sat sfactory w thin the imitat ons of its type The hot water system is the most expensive The pipeless furnace is sat sfactory only in a very small house The gravity warm air system is suitable n houses of average size but an objection to this type of heating is the arge basement area obstructed by pipes.

Forced draft warm air heat ng is not genera ly used in farm houses because it requires a power driven air circulator In loca it es where e ectric power is ava lable, a forced air system is most economical and e minates bulky pipes in the basement The forced draft system is easiest to insta in a house because the duct sections are relatively small and are more easi y handled.

Water and Plumb ng A plumbing system on the farm must take care of water supply, use and disposa

A water pressure system requires, first o al , an assured supply of about forty gal ons of water per day for each person in the househo d if such an amount cannot be supplied, then only a modified system may be feas ble Runn ng wa er should be provided at the kitchen s nk even f there is not an adequate supply of water for other uses.

The disposal system requires carefu cons deration If poss b e, it shou d be planned so that the basement drain can be attached without the need of a sump pump.

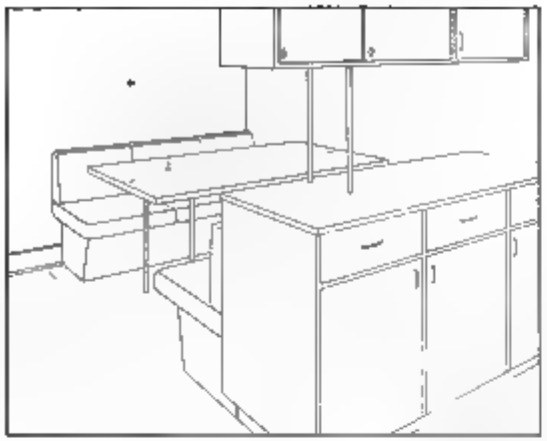
There are many areas in the pra r es where a septic tank with a tile disposal field wil not funct on properly because the soil is too compact to absorb the drain-off Wherever this situation exists, a arge concrete storage tank should be bu it This wi l collect fluid only and need be pumped out but once or twice a year Before bui d ng a disposal system, a copy of provincial sewage disposal regulations should be consu ted.

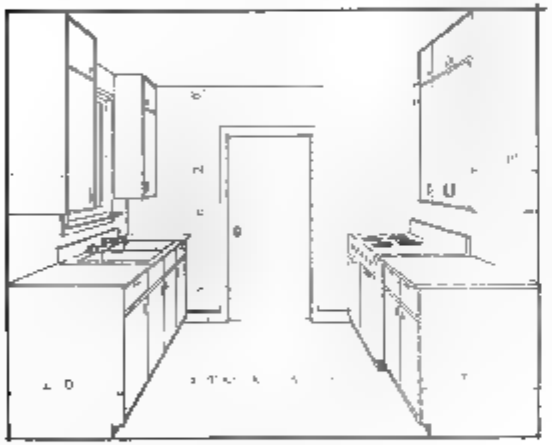
ELECTRIC WIRING

The electrical system for a house can also be la d out on the remodel ng plans This layout shou d show all types of outlets and sw tches in their proper locations Convenience outlets should be placed on the walls in pos tions wh ch perm the best furn ure arrangement Switches shou d be placed ust nside the door jamb of the ma n entrance to each room A three-way switch should be used where more than one switching position is required. For example, t shou d be poss ble to turn a ight in a stair hall, either on or off from downstairs or upstairs This requ res a three-way switch on each floor

Prov nc al regulat ons govern the size o wire conductor required for various uses Resident al wiring may be done with either fibre sheathed cable or armored meta cable The fibre cable wh ch is less expensive, is most commonly used. There may be circumstances in an old house where the st ffer armored cable is preferable for fish ng through wa ls and floors

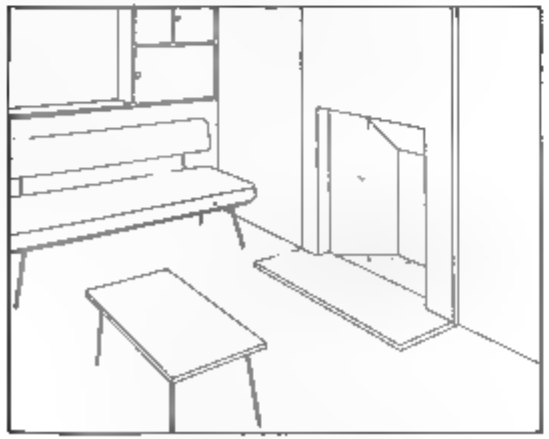
A given number of l ght fixtures does not ensure good quality llum nation for apart from provid ng l ght. fixtures must a so contro glare and shadows to an extent which will provide comfortable visua conditions. An exposed light bu b sho uld never be used for ighting because it causes a g are spot and sharp shadows wh ch promote eye s rain. A l bu bs should be covered with shades or g obes wh ch diffuse the light and sh e d the bulbs The cho ce of shades s highly important. When purchasing shades and fixtures be sure they wi l provide a proper amount of restful ight and, as we l, an attractive appearance

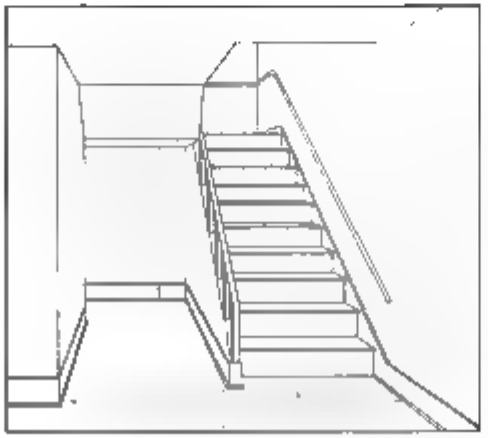


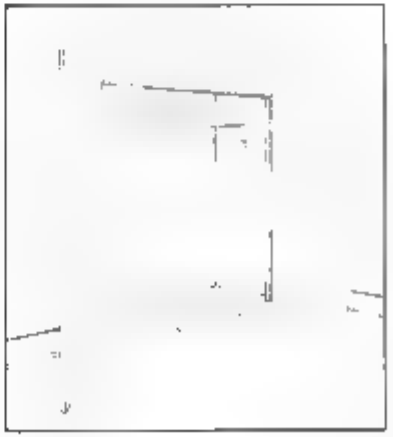


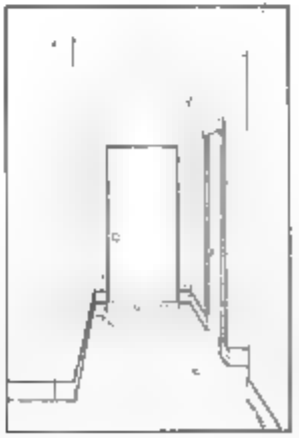
STANDARDS

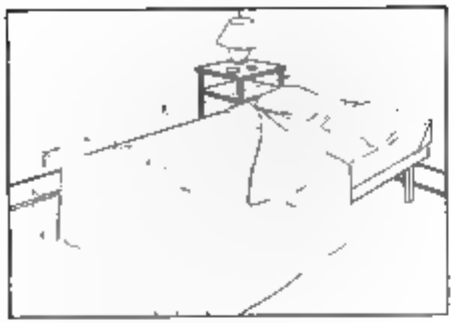
This section on standards illustrates the sizes of the furniture that is used every day in the average farm home. Also illustrated are space requirements for such features as dining nooks, stairs, closets, hallways and bathroom fixtures. The dimensions given are nearly all minimum dimensions, they should be considered only as approximate dimensions and are suggested merely to assist you with your furniture layout.

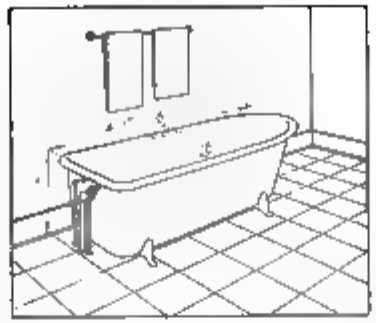


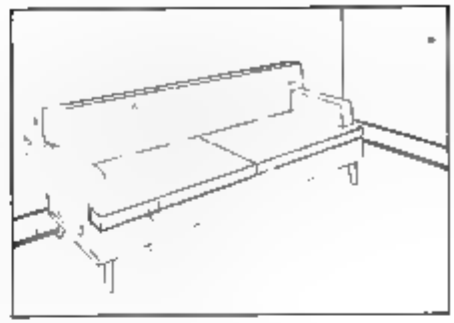


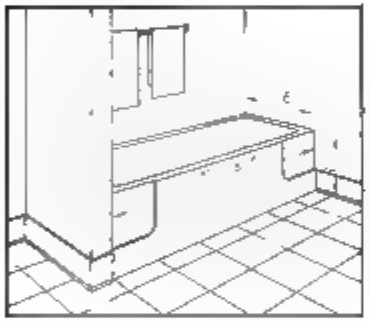


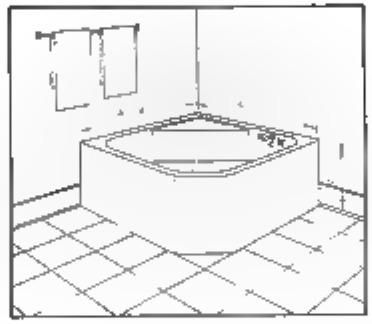


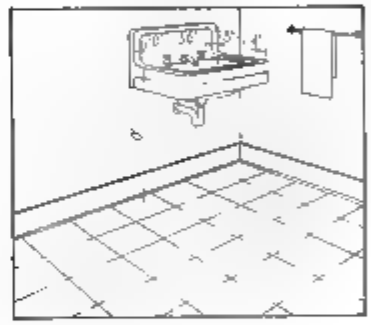


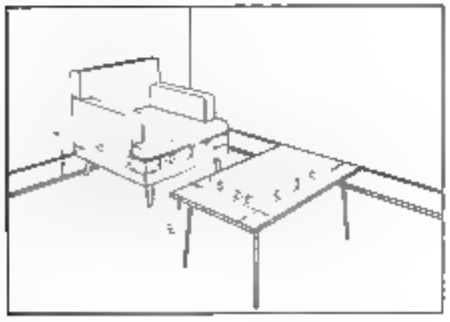


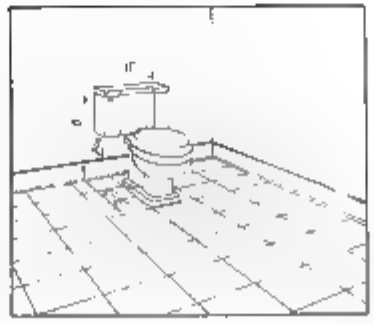


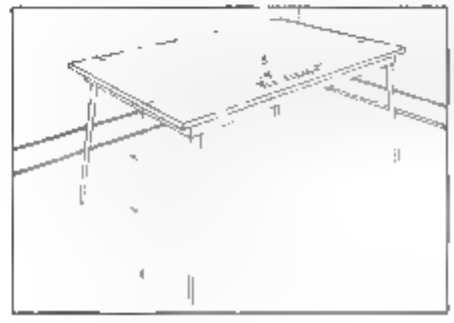




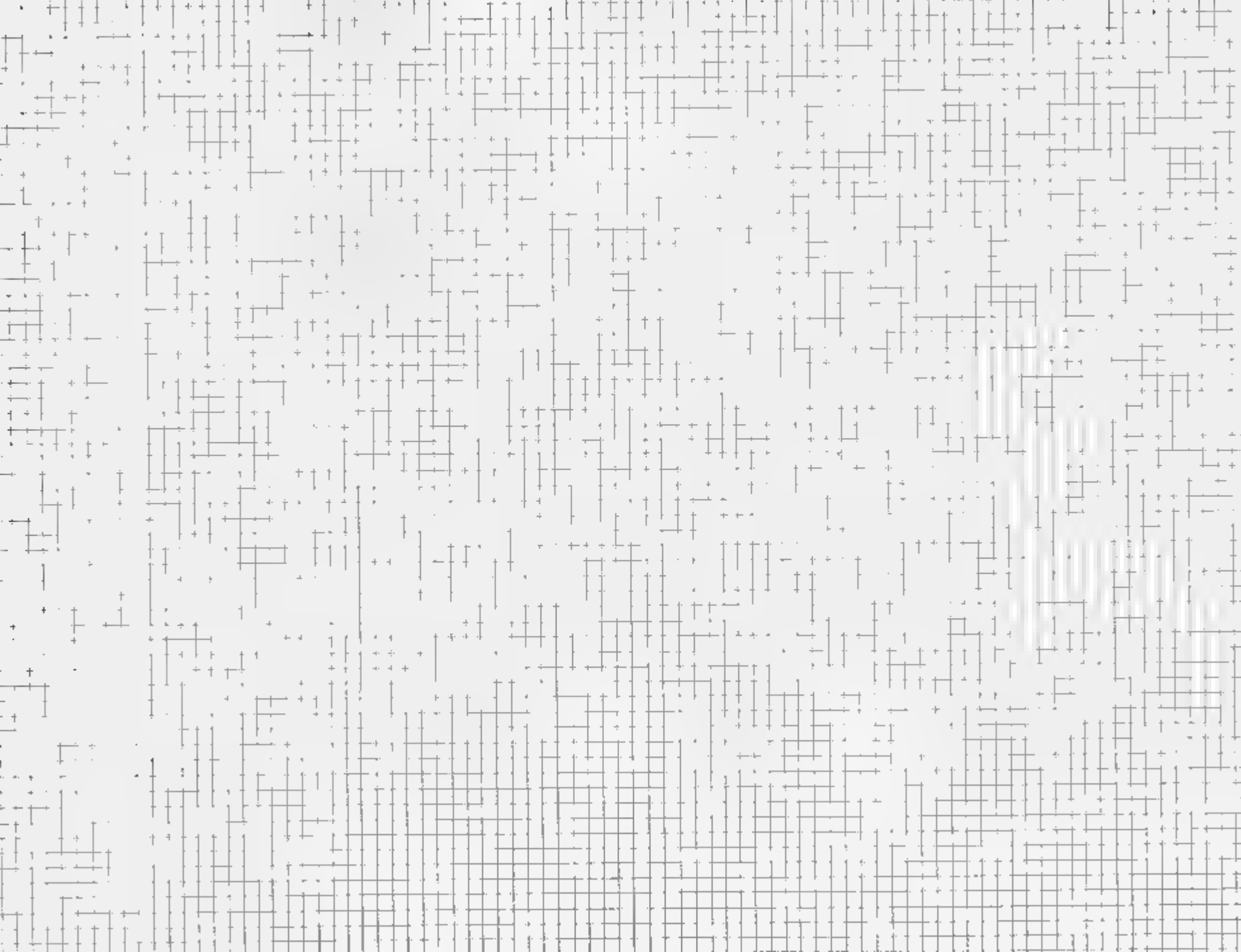








★ These last pages are ruled off in one-eighth inch squares on which you can draw plans of your house. Use either one or two squares for one foot



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